US009256863B2

(12) **United States Patent**
Chayun et al.

(10) **Patent No.: US 9,256,863 B2**
(45) **Date of Patent: Feb. 9, 2016**

(54) **RECEIVING MALFUNCTIONING MOBILE PHONE AND A DISPENSING FUNCTIONING CELLULAR TELEPHONE CONSOLE**

(71) Applicant: **CELLOMAT ISRAEL LTD.**, Netanya (IL)

(72) Inventors: **Itzik Chayun**, Kfar Saba (IL); **Meir Rabinovitch**, Emek Hefer (IL); **Hanan Samet**, Hadar Am (IL); **Rafael Poran**, Kochav Yair (IL); **Roshel Borachov**, Neve Yamin (IL); **Ron Nabarro**, Raanana (IL); **Rafi Bhrami**, Givatayim (IL)

(73) Assignee: **CELLOMAT ISRAEL LTD.**, Netanya (IL)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 456 days.

(21) Appl. No.: **13/873,341**

(22) Filed: **Apr. 30, 2013**

(65) **Prior Publication Data**

US 2013/0246285 A1 Sep. 19, 2013

Related U.S. Application Data

(63) Continuation-in-part of application No. PCT/IL2012/000392, filed on Dec. 19, 2012, which is a continuation-in-part of application No. 13/629,245, filed on Sep. 27, 2012, now Pat. No. 8,755,783.

(60) Provisional application No. 61/577,112, filed on Dec. 19, 2011.

(51) **Int. Cl.**

H04W 24/02	(2009.01)
G06Q 10/00	(2012.01)
G07F 7/06	(2006.01)
G07F 9/00	(2006.01)

(52) **U.S. Cl.**

CPC ***G06Q 10/20*** (2013.01); ***G07F 7/06*** (2013.01); ***G07F 9/00*** (2013.01)

(58) **Field of Classification Search**

None

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2004/0167804	A1*	8/2004	Simpson	A61B 5/0002 705/3
2004/0172300	A1*	9/2004	Mihai	A61B 5/0002 705/2
2004/0172301	A1*	9/2004	Mihai	A61B 5/0002 705/2
2005/0055244	A1*	3/2005	Mullan	G06Q 50/22 705/2

* cited by examiner

Primary Examiner — Diane Mizrahi

(57) **ABSTRACT**

The present invention relates to a user-friendly and a user-interactive cellular mobile phone console, allowing a user to interactively replace a malfunctioning cellular mobile phone with a functioning mobile phone, whiles enabling the user to track said malfunctioning cellular mobile through its delivery cycle.

71 Claims, 31 Drawing Sheets

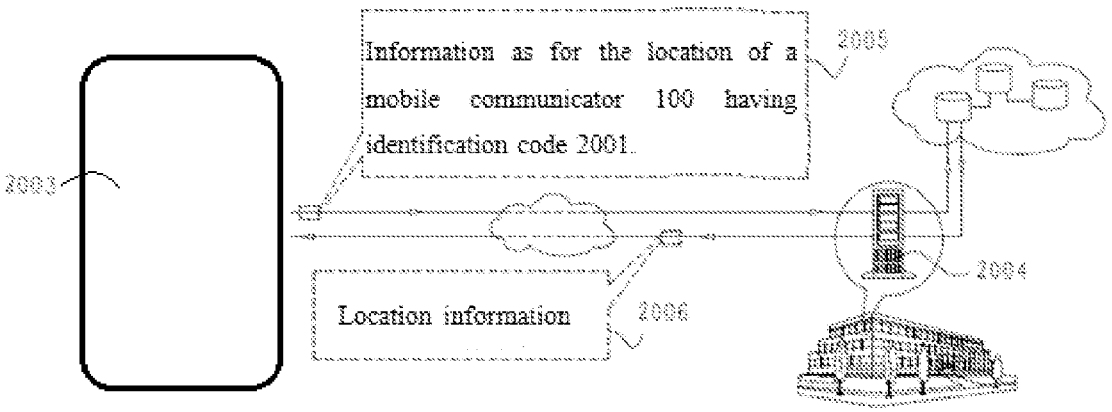


FIG. 1A

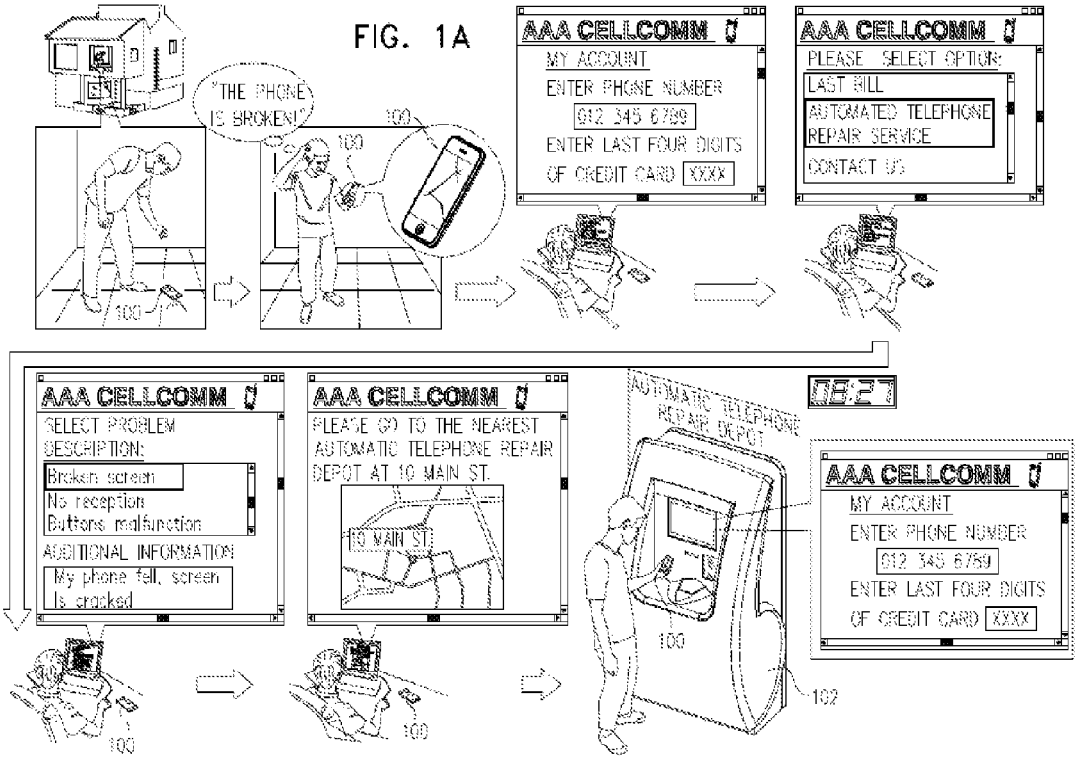

"THE PHONE IS BROKEN!"
100
AAA CELLCOMM
MY ACCOUNT
ENTER PHONE NUMBER
012 345 6789
ENTER LAST FOUR DIGITS OF CREDIT CARD XXXX
AAA CELLCOMM
PLEASE SELECT OPTION:
LAST BILL
AUTOMATED TELEPHONE REPAIR SERVICE
CONTACT US
AAA CELLCOMM
SELECT PROBLEM DESCRIPTION:
Broken screen
No reception
Buttons malfunction
ADDITIONAL INFORMATION
My phone fell, screen is cracked
AAA CELLCOMM
PLEASE GO TO THE NEAREST AUTOMATIC TELEPHONE REPAIR DEPOT AT 10 MAIN ST.
10 MAIN ST.
AUTOMATIC TELEPHONE REPAIR DEPOT
08:27
AAA CELLCOMM
MY ACCOUNT
ENTER PHONE NUMBER
012 345 6789
ENTER LAST FOUR DIGITS OF CREDIT CARD XXXX
102

FIG. 1B

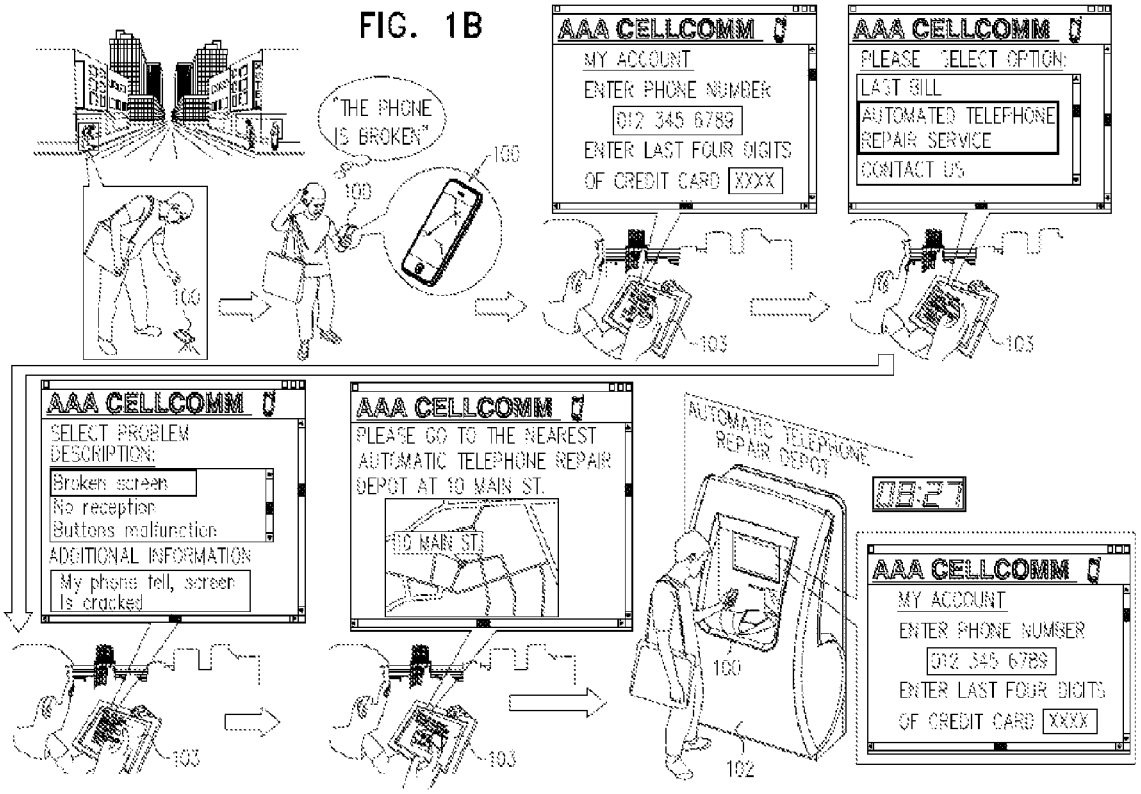

"THE PHONE IS BROKEN"
100
AAA CELLCOMM
MY ACCOUNT
ENTER PHONE NUMBER
012 345 6789
ENTER LAST FOUR DIGITS OF CREDIT CARD XXXX
AAA CELLCOMM
PLEASE SELECT OPTION:
LAST BILL
AUTOMATED TELEPHONE REPAIR SERVICE
CONTACT US
AAA CELLCOMM
SELECT PROBLEM DESCRIPTION:
Broken screen
No reception
Buttons malfunction
ADDITIONAL INFORMATION
My phone fell, screen is cracked
AAA CELLCOMM
PLEASE GO TO THE NEAREST AUTOMATIC TELEPHONE REPAIR DEPOT AT 10 MAIN ST.
10 MAIN ST
AUTOMATIC TELEPHONE REPAIR DEPOT
08:27
AAA CELLCOMM
MY ACCOUNT
ENTER PHONE NUMBER
012 345 6789
ENTER LAST FOUR DIGITS OF CREDIT CARD XXXX
102
103

FIG. 1C

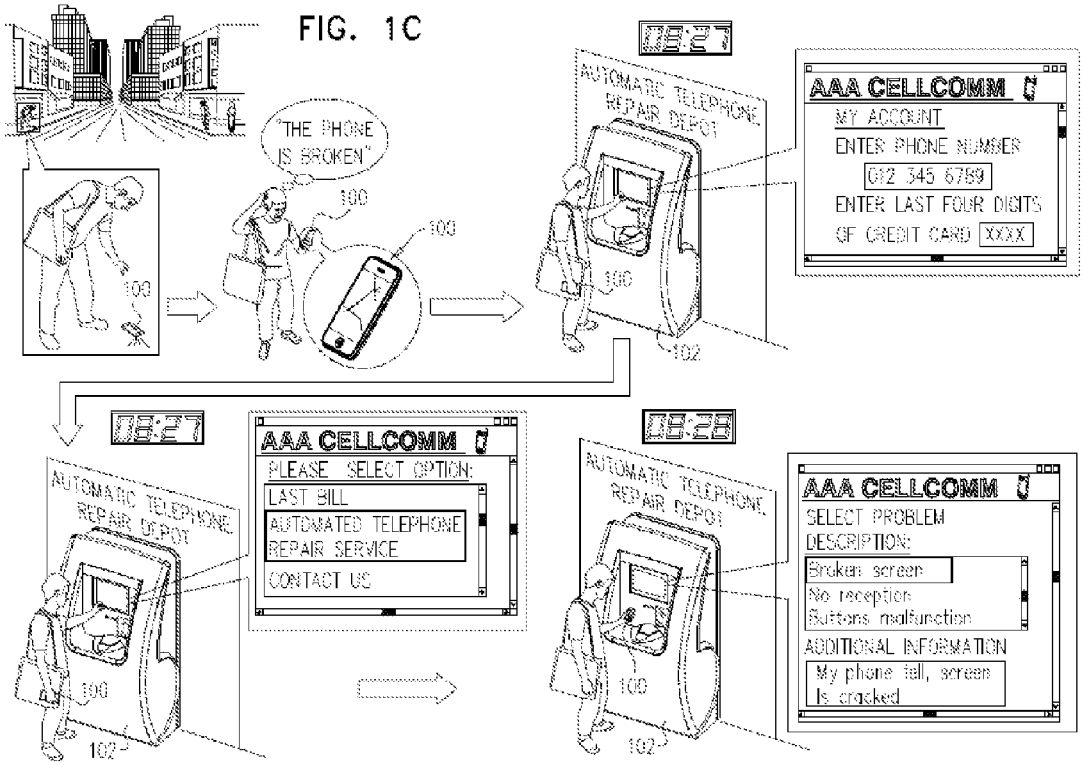

"THE PHONE IS BROKEN"
100
103
102
08:27
AUTOMATIC TELEPHONE REPAIR DEPOT
AAA CELLCOMM
MY ACCOUNT
ENTER PHONE NUMBER
012 345 6789
ENTER LAST FOUR DIGITS OF CREDIT CARD XXXX
08:27
AAA CELLCOMM
PLEASE SELECT OPTION:
LAST BILL
AUTOMATED TELEPHONE REPAIR SERVICE
CONTACT US
08:28
AAA CELLCOMM
SELECT PROBLEM DESCRIPTION:
Broken screen
No reception
Buttons malfunction
ADDITIONAL INFORMATION
My phone fell, screen is cracked

FIG. 2A

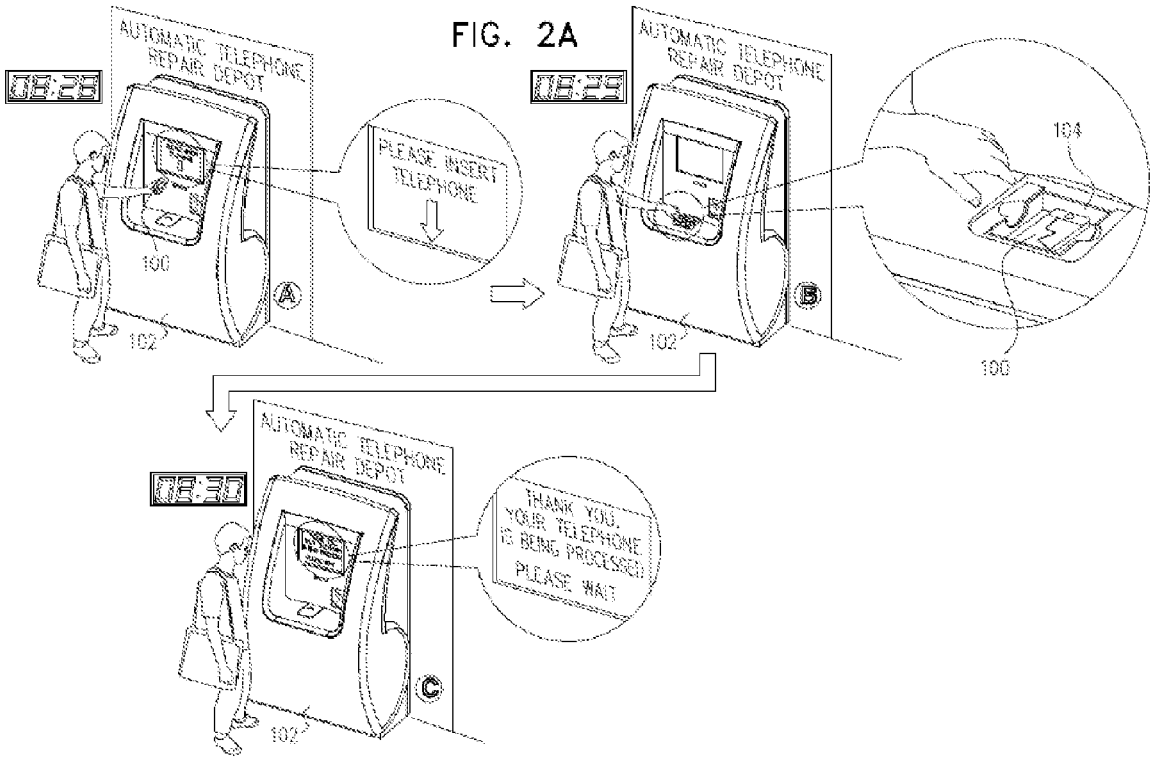

AUTOMATIC TELEPHONE REPAIR DEPOT
08:28
PLEASE INSERT TELEPHONE
100
102
A
AUTOMATIC TELEPHONE REPAIR DEPOT
08:29
104
100
102
B
AUTOMATIC TELEPHONE REPAIR DEPOT
08:30
THANK YOU. YOUR TELEPHONE IS BEING PROCESSED PLEASE WAIT
102
C

FIG. 2B

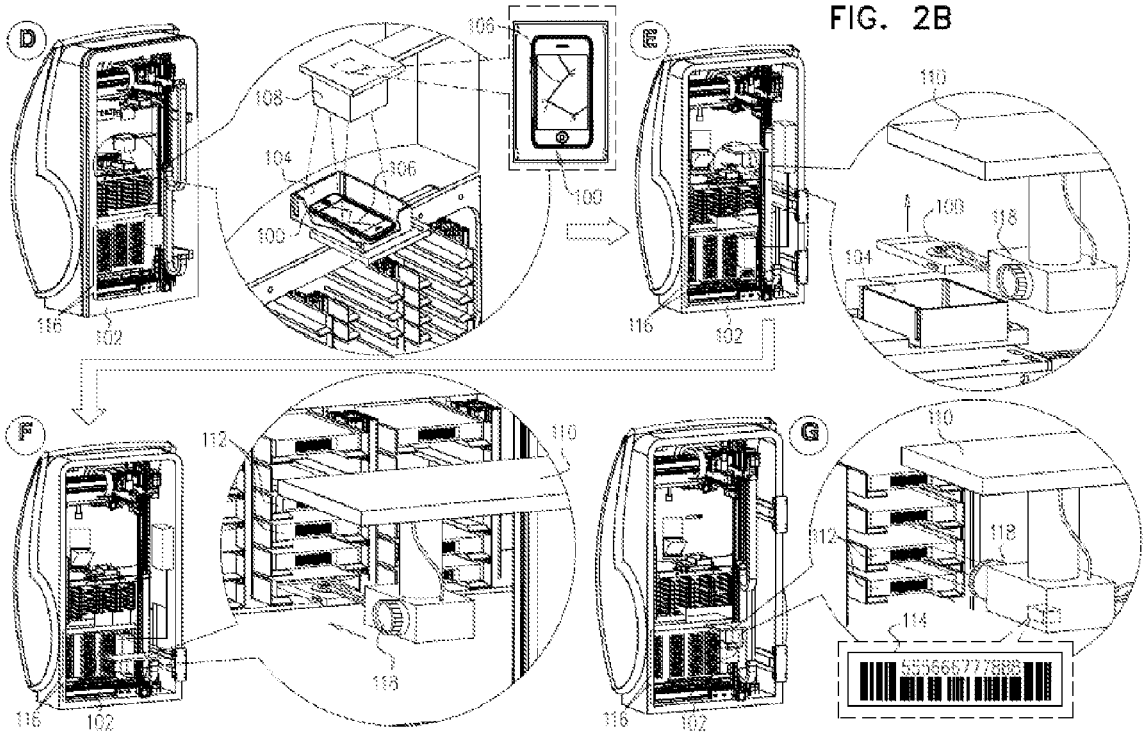
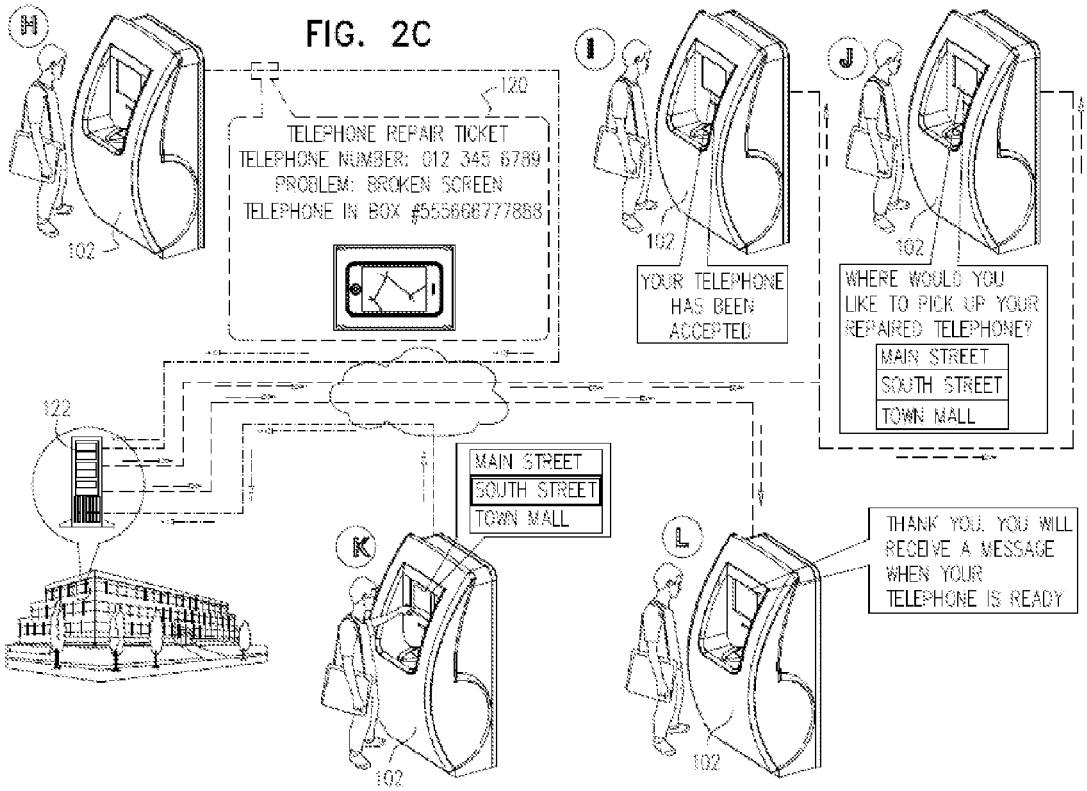


FIG. 2C


H
I
J
K
L
120
TELEPHONE REPAIR TICKET
TELEPHONE NUMBER: 012 345 6789
PROBLEM: BROKEN SCREEN
TELEPHONE IN BOX #5558677888
102
YOUR TELEPHONE HAS BEEN ACCEPTED
WHERE WOULD YOU LIKE TO PICK UP YOUR REPAIRED TELEPHONE?
MAIN STREET
SOUTH STREET
TOWN MALL
122
THANK YOU. YOU WILL RECEIVE A MESSAGE WHEN YOUR TELEPHONE IS READY

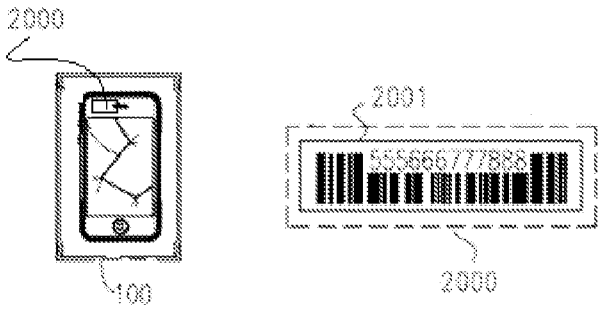

2000
2001
555667777888
2000
100

FIG. 2D

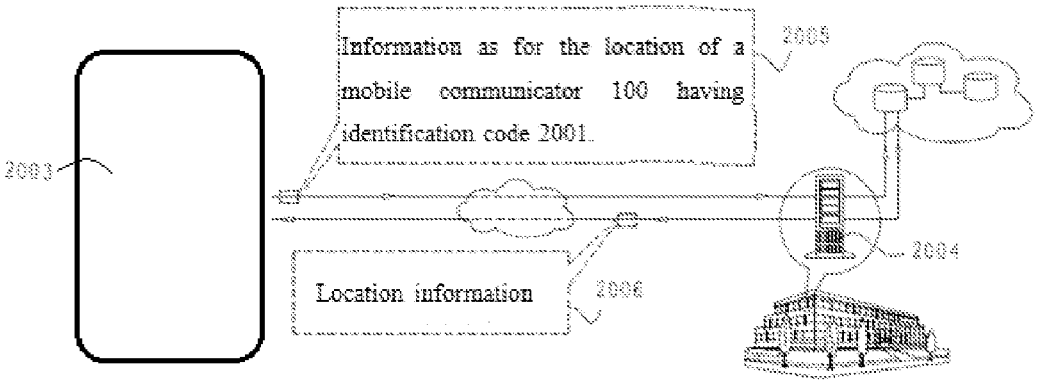

Information as for the location of a mobile communicator 100 having identification code 2001.
2005
2003
2004
Location information
2006

FIG. 2E

FIG. 3A

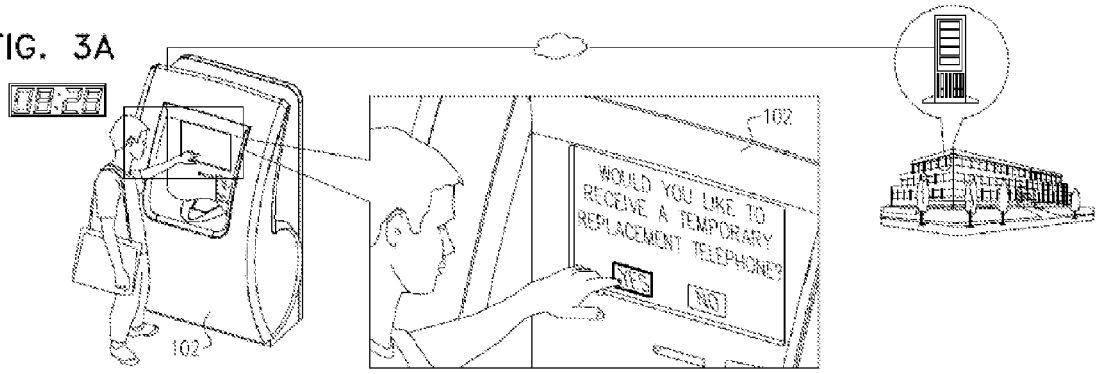

08:28
102
WOULD YOU LIKE TO RECEIVE A TEMPORARY REPLACEMENT TELEPHONE?
YES
NO
102

FIG. 3B

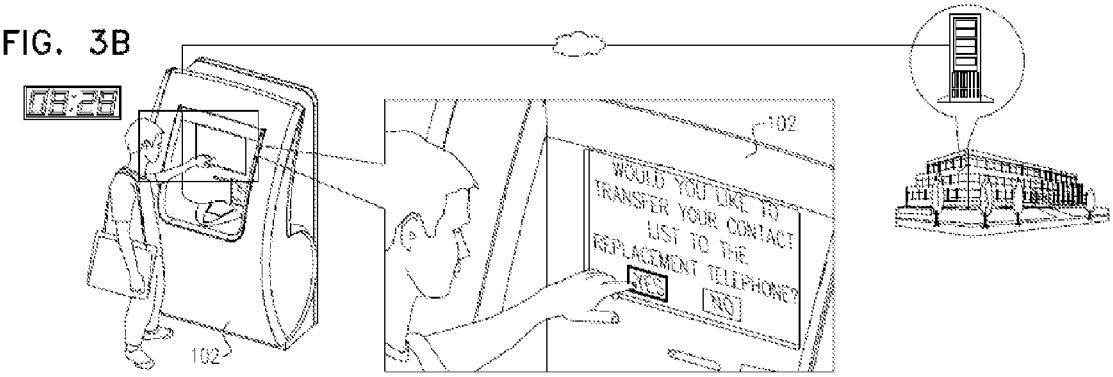
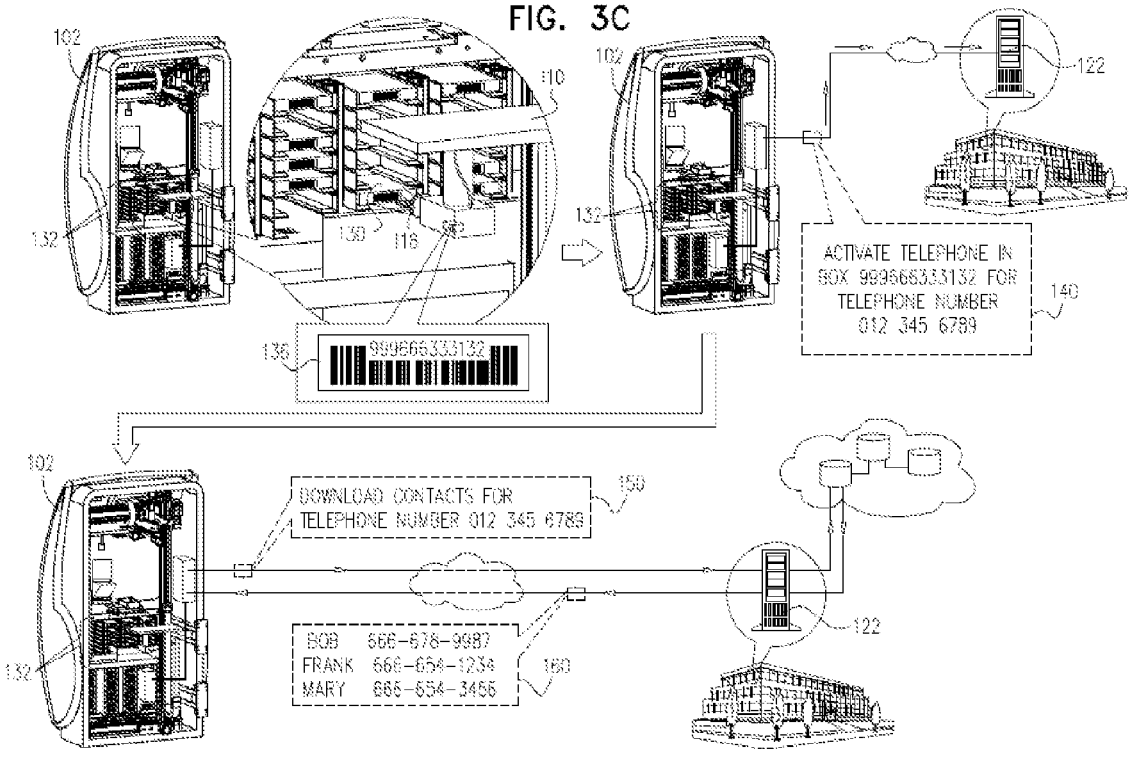

08:28
102
WOULD YOU LIKE TO TRANSFER YOUR CONTACT LIST TO THE REPLACEMENT TELEPHONE?
YES
NO
102

FIG. 3C


102
110
132
130
116
136
999666333132
102
122
132
ACTIVATE TELEPHONE IN SOX 999666333132 FOR TELEPHONE NUMBER 012 345 6789
140
102
DOWNLOAD CONTACTS FOR TELEPHONE NUMBER 012 345 6789
150
BOB 666-678-9987
FRANK 666-654-1234
MARY 665-654-3456
160
122
132

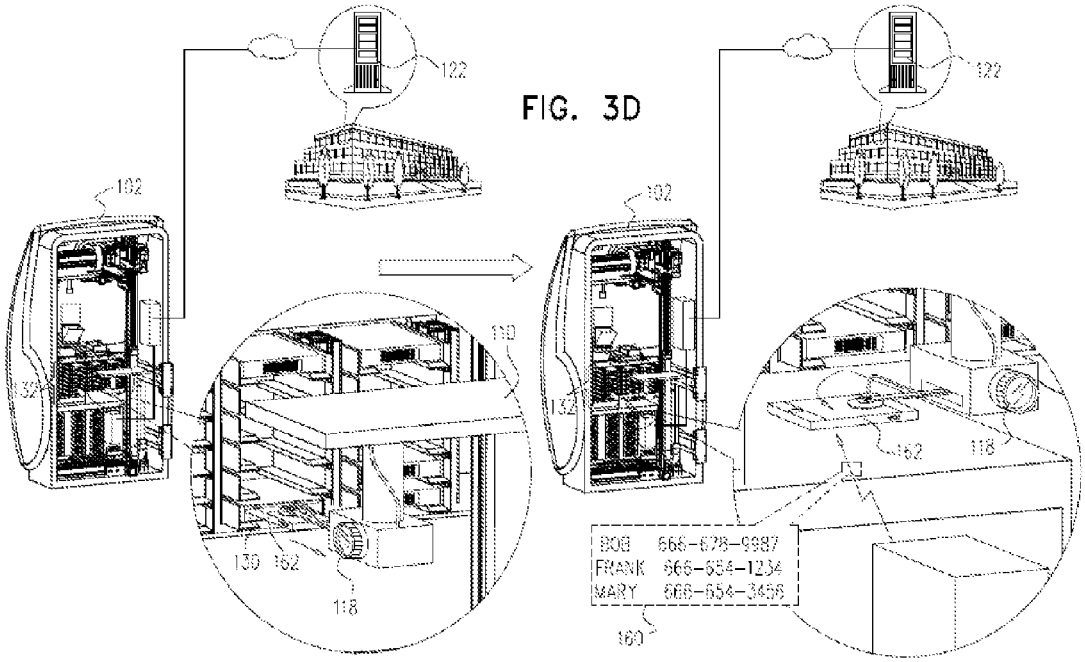

122
102
110
139
162
118
122
102
162
118
BOB 666-678-9987
FRANK 666-654-1234
MARY 666-654-3456
160

FIG. 3D

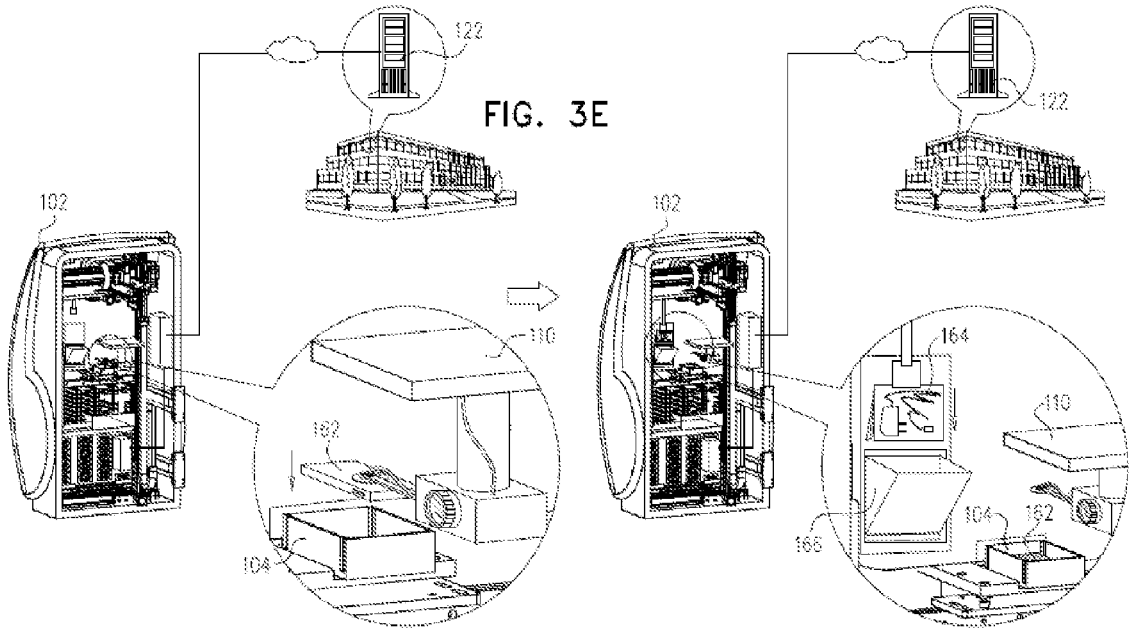


FIG. 3E

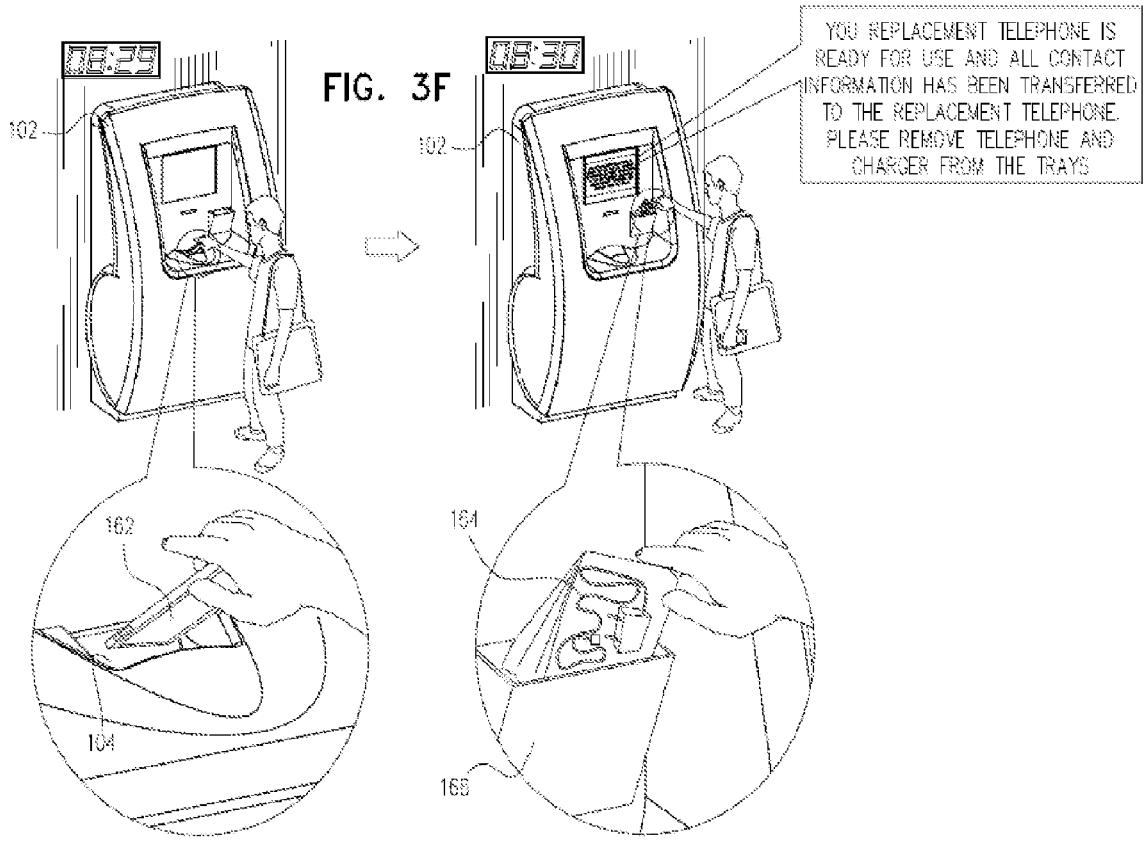

08:29
102
162
104
08:30
102
YOU REPLACEMENT TELEPHONE IS READY FOR USE AND ALL CONTACT INFORMATION HAS BEEN TRANSFERRED TO THE REPLACEMENT TELEPHONE. PLEASE REMOVE TELEPHONE AND CHARGER FROM THE TRAYS
164
168

FIG. 3F

FIG. 3G

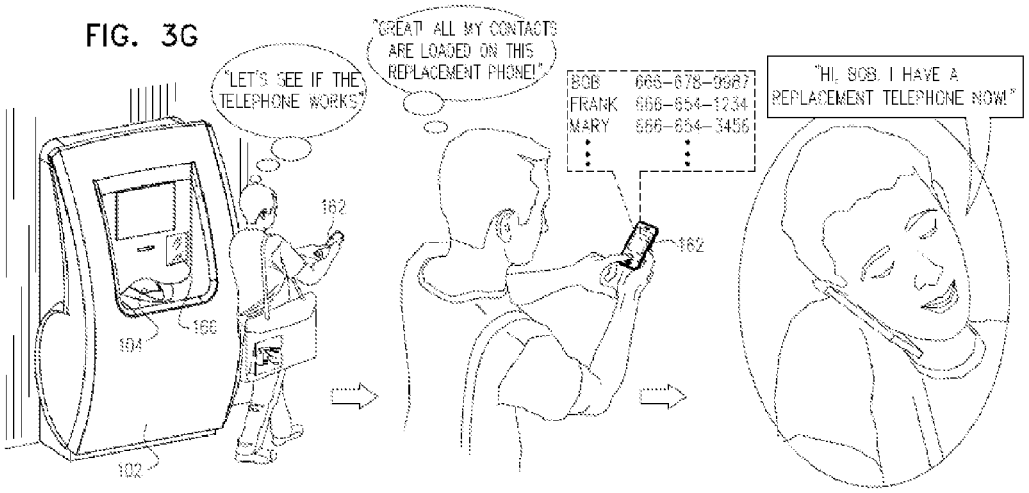

"LET'S SEE IF THE TELEPHONE WORKS"
"GREAT! ALL MY CONTACTS ARE LOADED ON THIS REPLACEMENT PHONE!"
BOB 666-678-9987
FRANK 666-654-1234
MARY 666-654-3456
"HI, BOB. I HAVE A REPLACEMENT TELEPHONE NOW!"
162
162
104
166
102

FIG. 4A

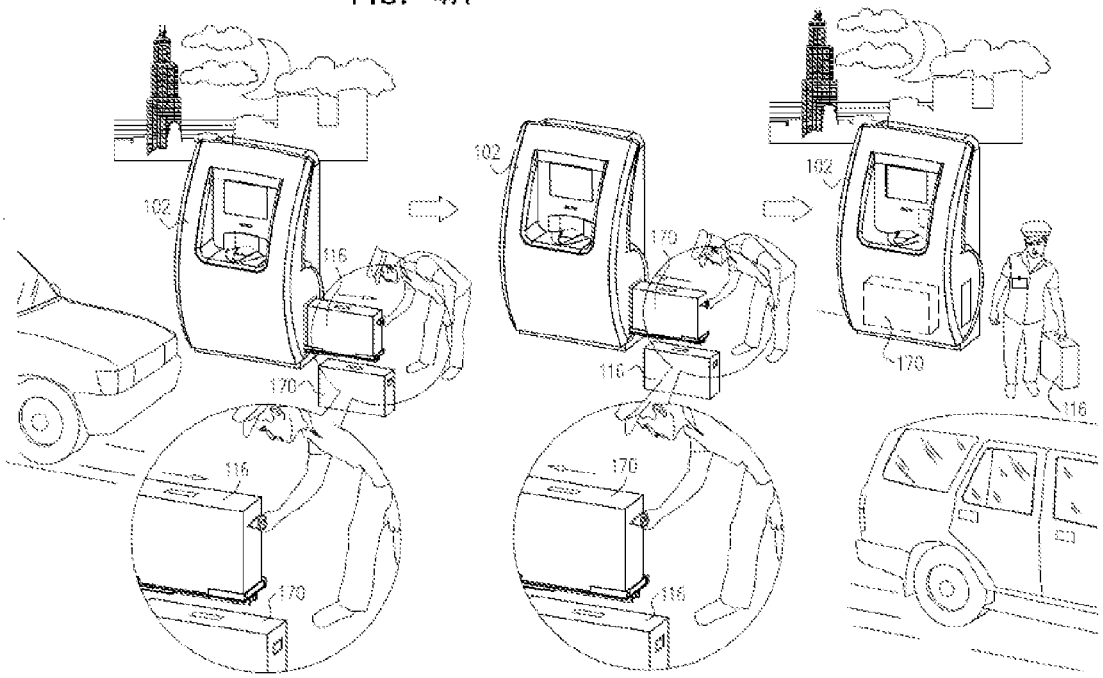


FIG. 4B

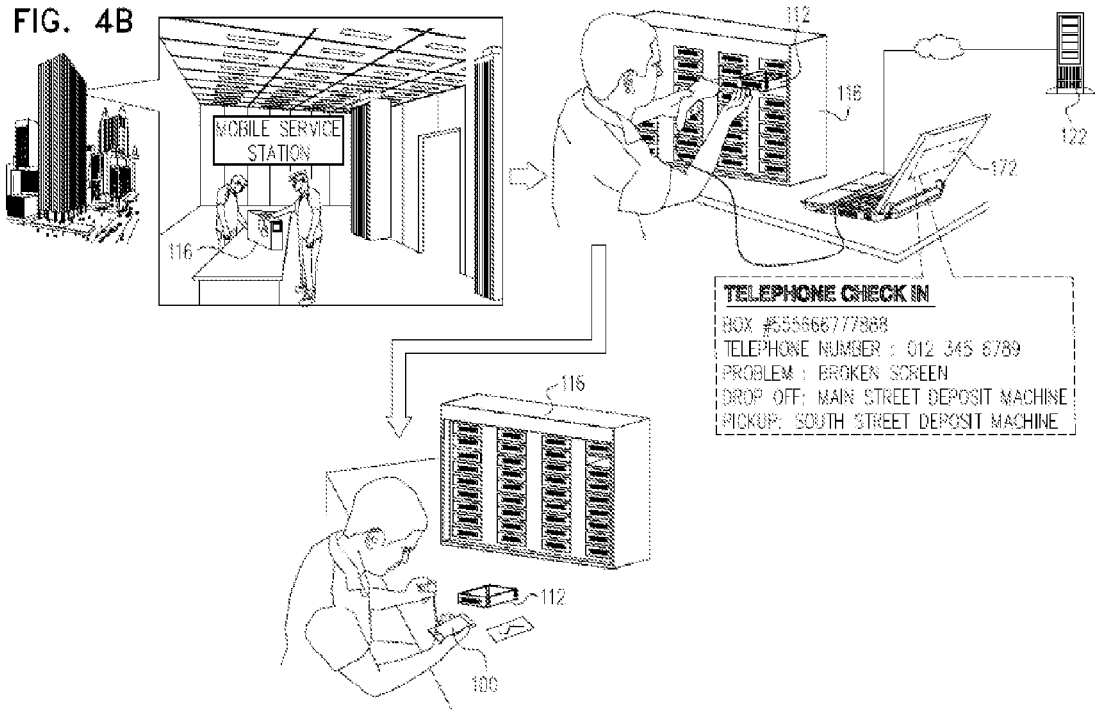

MOBILE SERVICE STATION
116
112
116
122
172
TELEPHONE CHECK IN
BOX #5556677788
TELEPHONE NUMBER : 012 345 6789
PROBLEM : BROKEN SCREEN
DROP OFF: MAIN STREET DEPOSIT MACHINE
PICKUP: SOUTH STREET DEPOSIT MACHINE
116
112
100

FIG. 4C

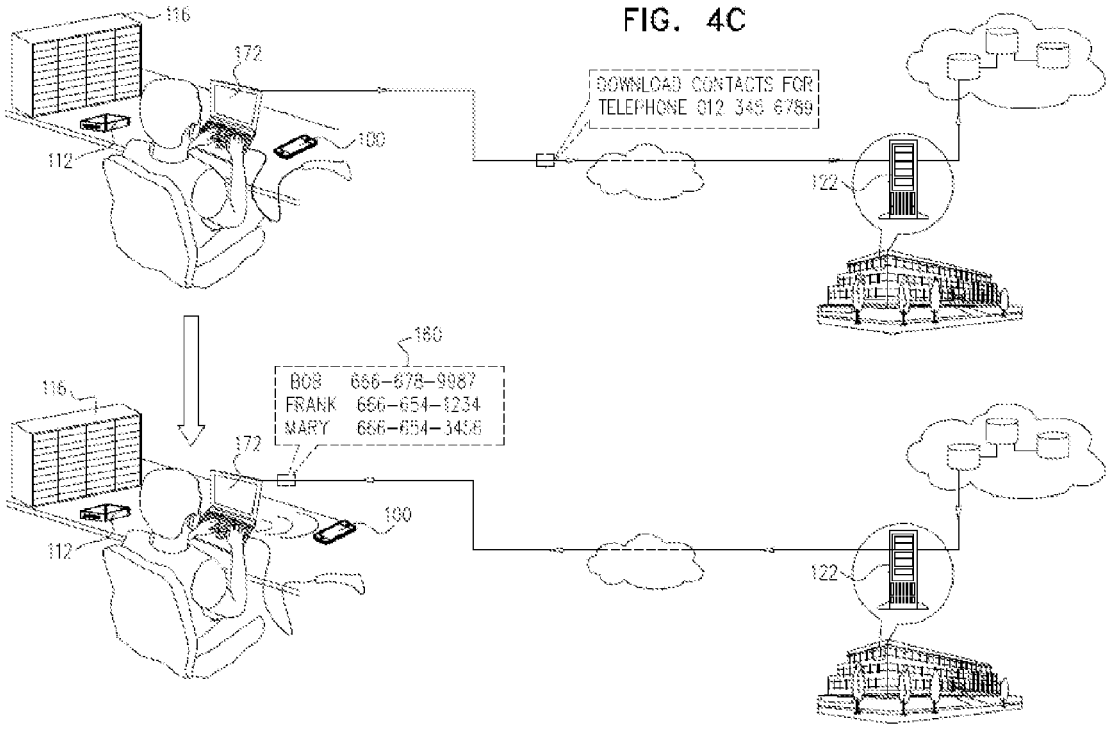

116
172
100
112
DOWNLOAD CONTACTS FOR TELEPHONE 012 345 6789
122
180
BOB 666-876-9987
FRANK 666-654-1234
MARY 666-654-3456
116
172
190
112
122

FIG. 4D

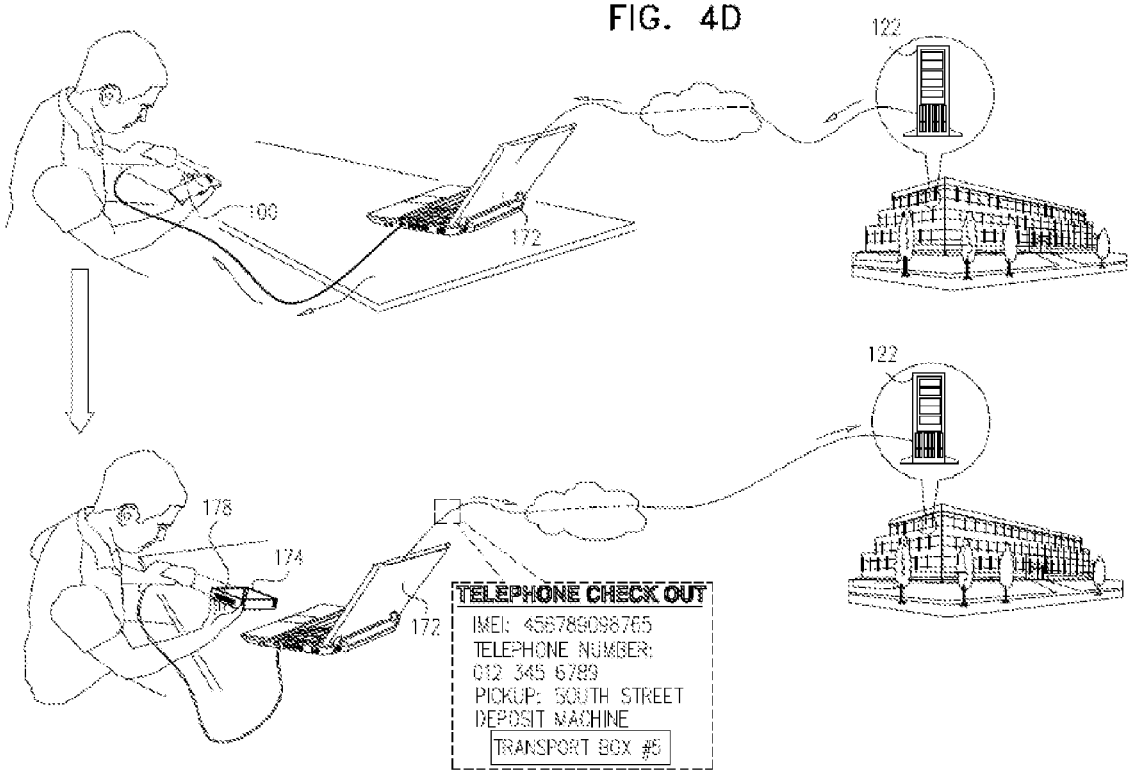

122
100
172
122
178
174
172
TELEPHONE CHECK OUT
IMEI: 456789D98765
TELEPHONE NUMBER:
012 345 6789
PICKUP: SOUTH STREET
DEPOSIT MACHINE
TRANSPORT BOX #5

FIG. 4E

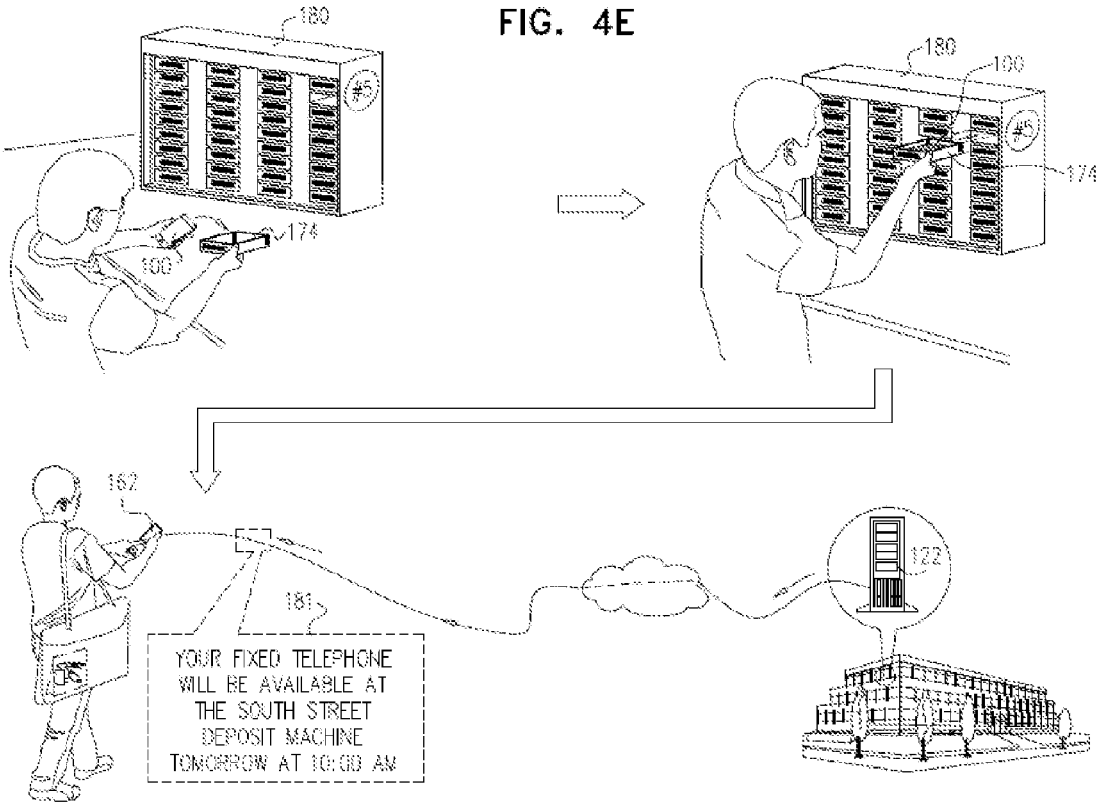

180
174
100
180
100
174
162
181
YOUR FIXED TELEPHONE WILL BE AVAILABLE AT THE SOUTH STREET DEPOSIT MACHINE TOMORROW AT 10:00 AM
122

FIG. 4F

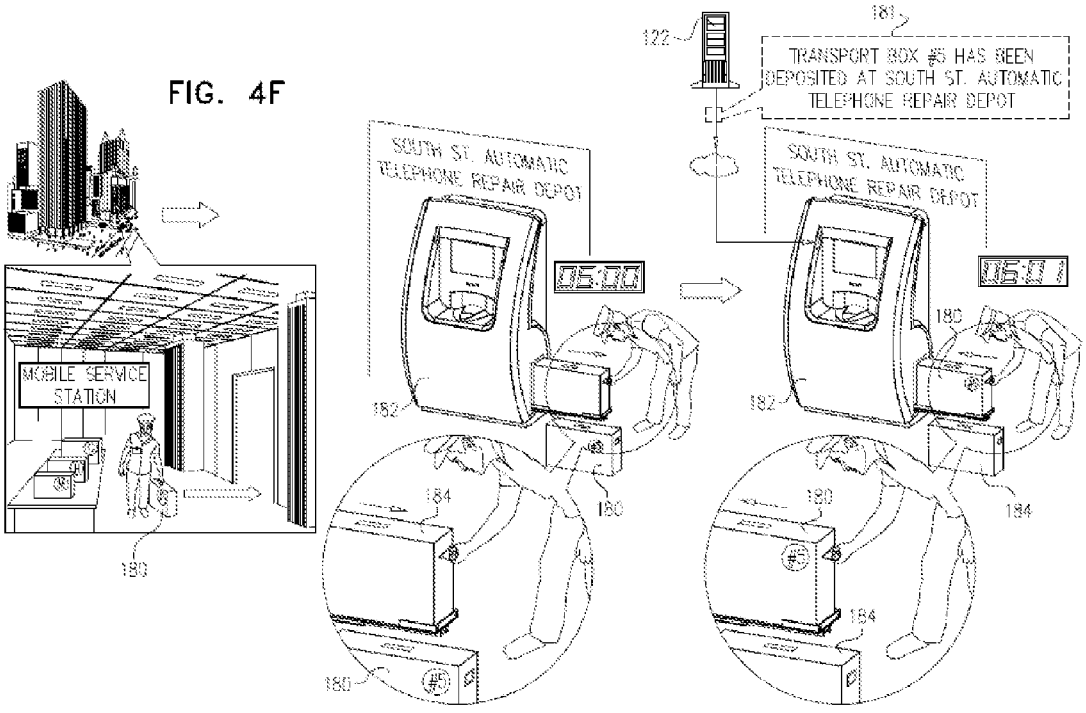

MOBILE SERVICE STATION
180
SOUTH ST. AUTOMATIC TELEPHONE REPAIR DEPOT
05:00
182
184
180
180
122
181
TRANSPORT BOX #5 HAS BEEN DEPOSITED AT SOUTH ST. AUTOMATIC TELEPHONE REPAIR DEPOT
SOUTH ST. AUTOMATIC TELEPHONE REPAIR DEPOT
06:01
182
180
180
184
184

FIG. 5A

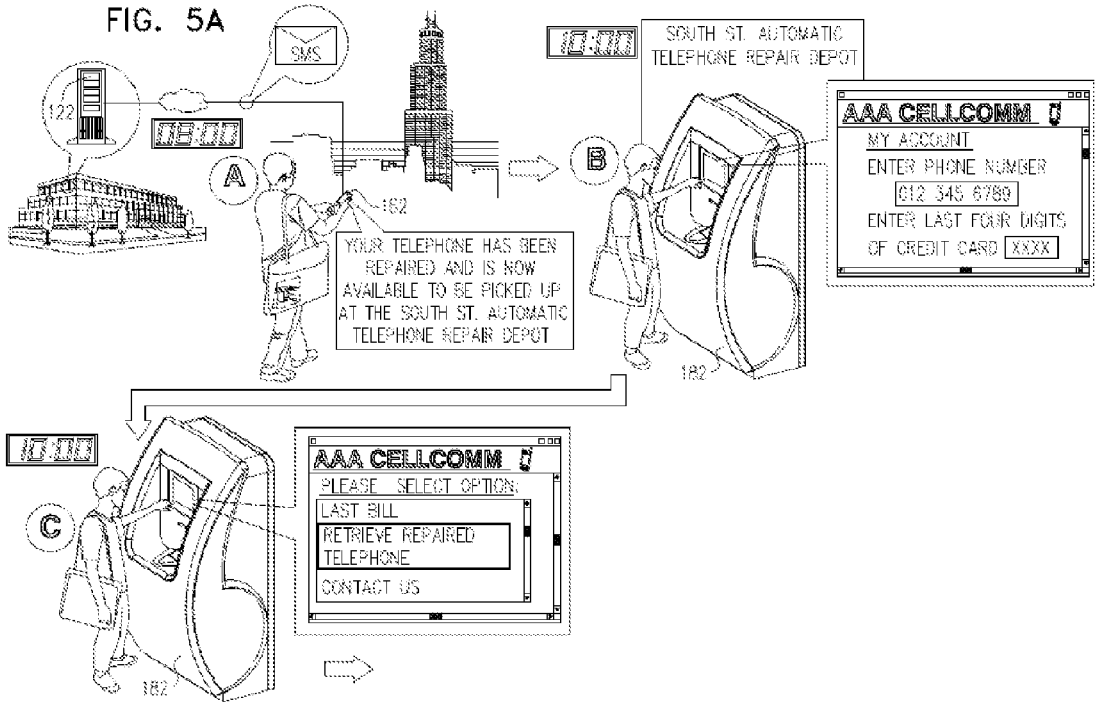

SMS
122
08:00
A
182
YOUR TELEPHONE HAS BEEN REPAIRED AND IS NOW AVAILABLE TO BE PICKED UP AT THE SOUTH ST. AUTOMATIC TELEPHONE REPAIR DEPOT
10:30
SOUTH ST. AUTOMATIC TELEPHONE REPAIR DEPOT
B
182
AAA CELLCOMM
MY ACCOUNT
ENTER PHONE NUMBER
012 345 6789
ENTER LAST FOUR DIGITS OF CREDIT CARD XXXX
10:00
C
182
AAA CELLCOMM
PLEASE SELECT OPTION:
LAST BILL
RETRIEVE REPAIRED TELEPHONE
CONTACT US

FIG. 5B

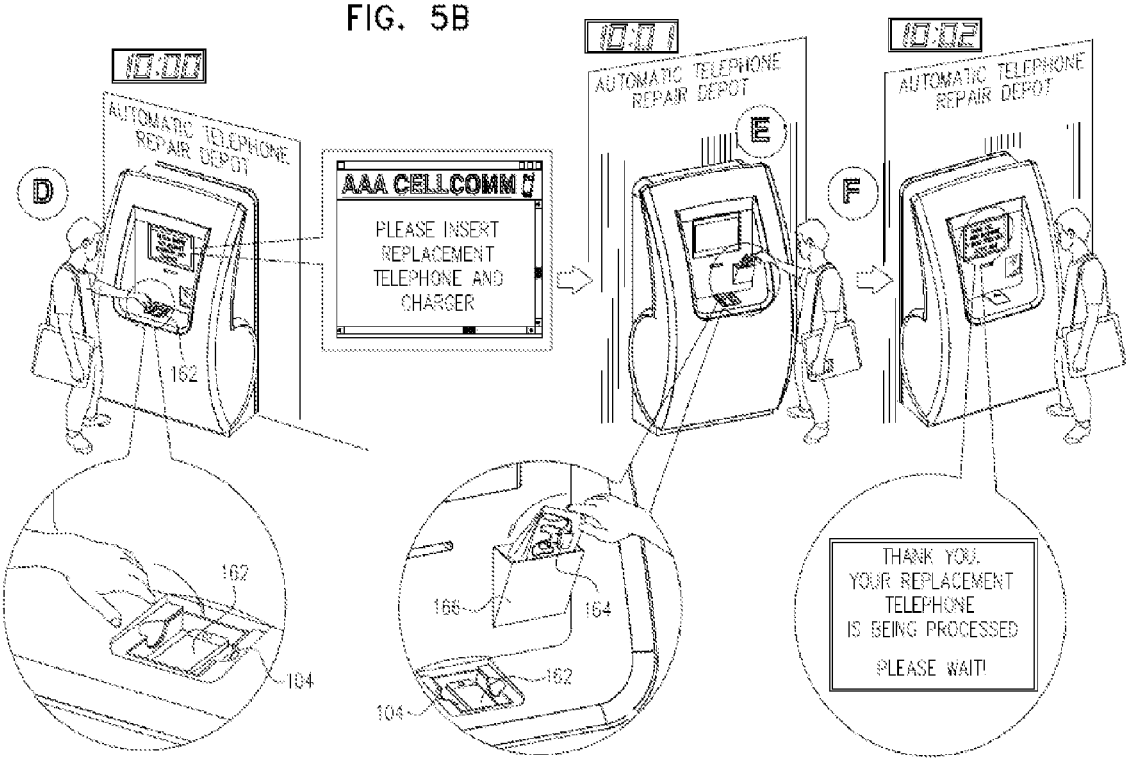
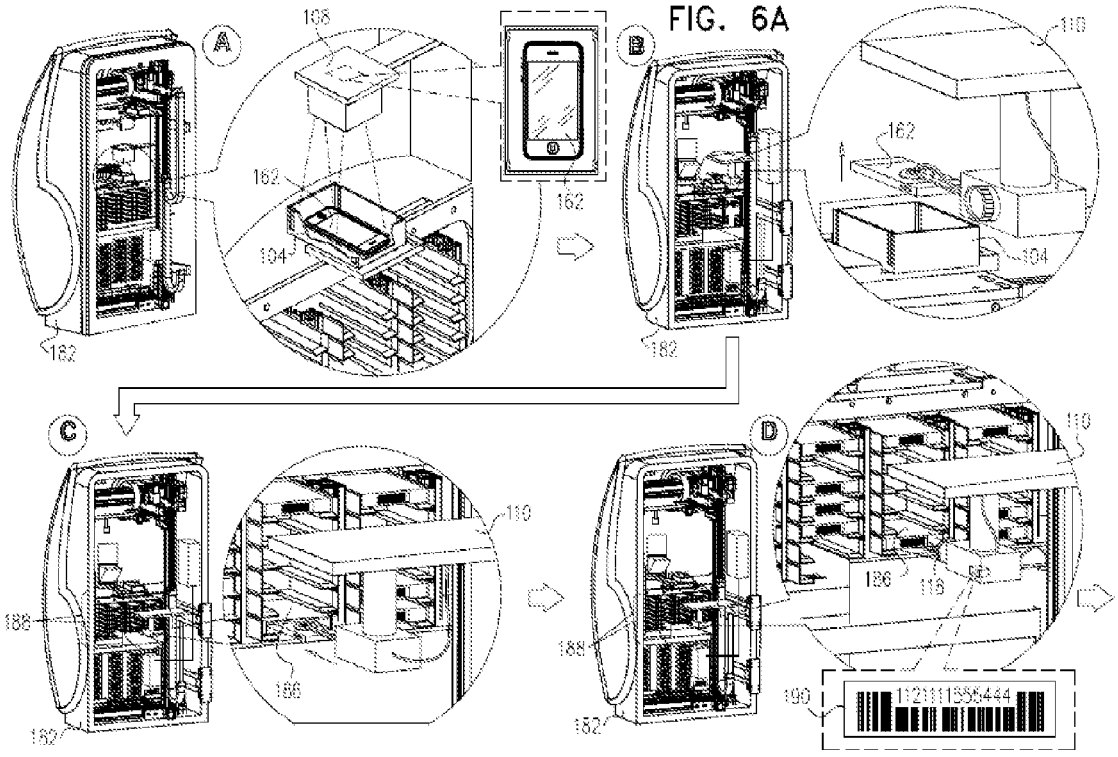

10:00
AUTOMATIC TELEPHONE REPAIR DEPOT
D
AAA CELLCOMM
PLEASE INSERT REPLACEMENT TELEPHONE AND CHARGER
162
167
164
10:01
AUTOMATIC TELEPHONE REPAIR DEPOT
E
166
164
162
104
10:02
AUTOMATIC TELEPHONE REPAIR DEPOT
E
THANK YOU.
YOUR REPLACEMENT TELEPHONE IS BEING PROCESSED
PLEASE WAIT!

FIG. 6A



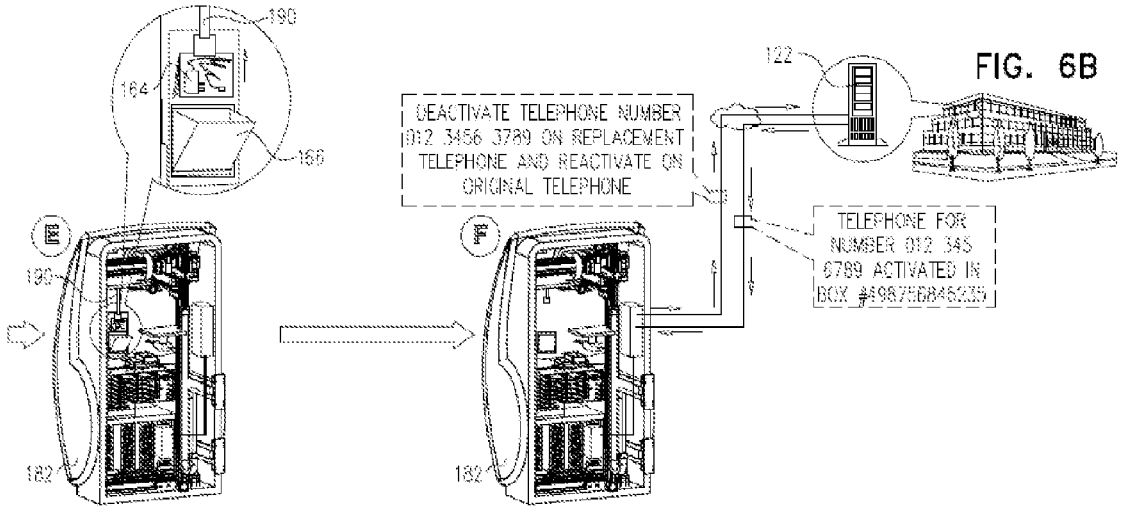

190
164
166
E
130
182
DEACTIVATE TELEPHONE NUMBER 012 3456 3789 ON REPLACEMENT TELEPHONE AND REACTIVATE ON ORIGINAL TELEPHONE
F
182
122
TELEPHONE FOR NUMBER 012 345 6789 ACTIVATED IN BOX #1987EB8452X5

FIG. 6B

FIG. 6C

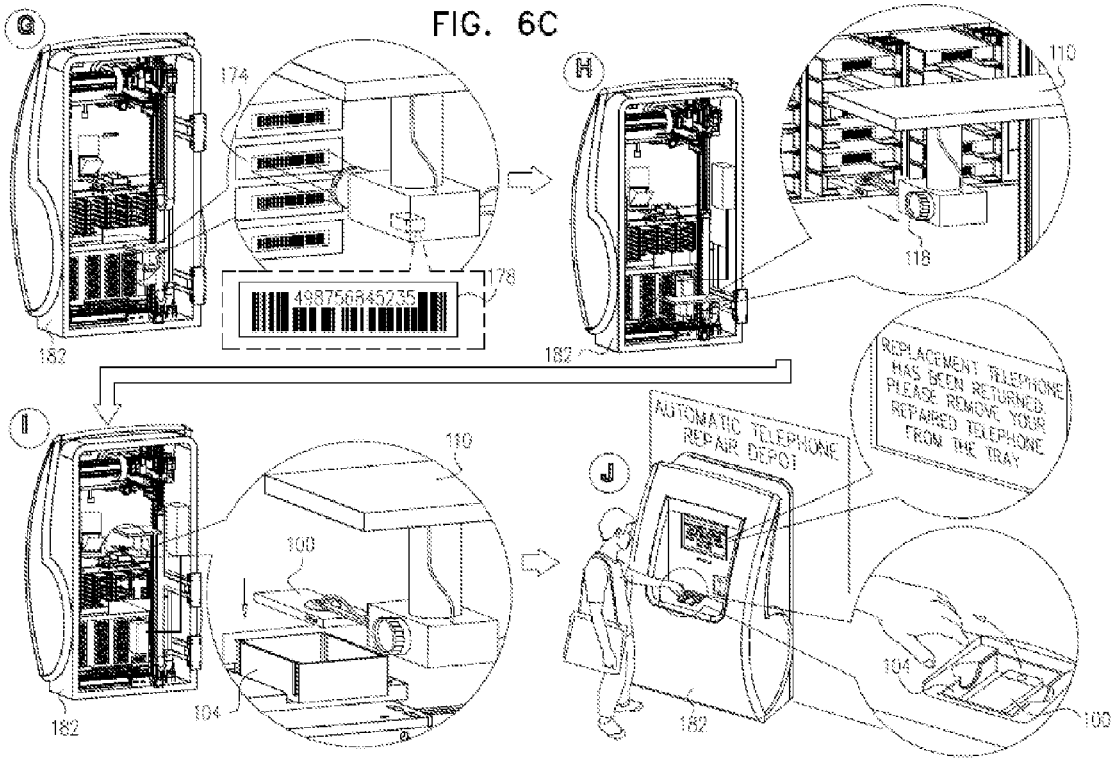
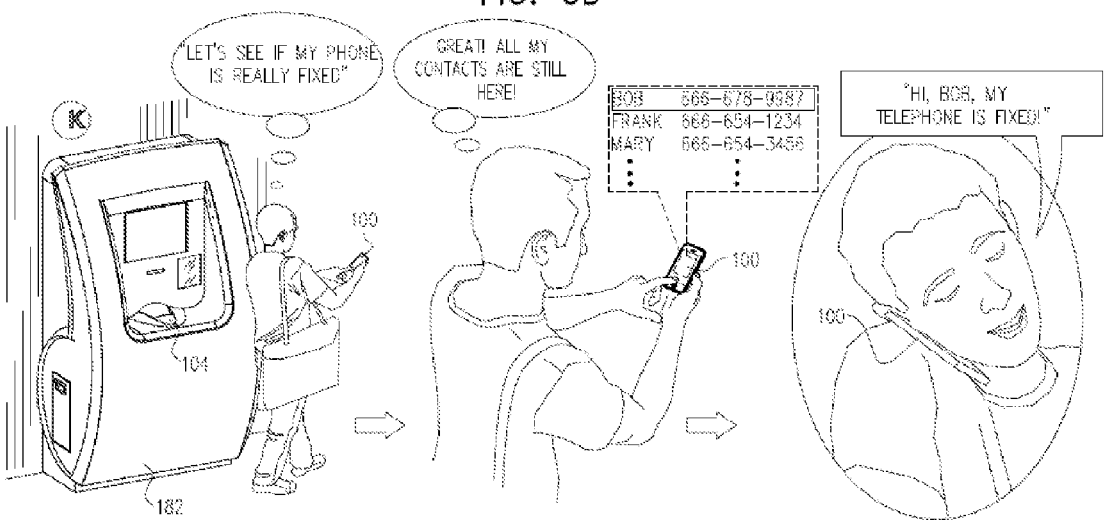

G
174
178
4987568845235
182
H
110
118
182
I
110
100
104
182
J
AUTOMATIC TELEPHONE REPAIR DEPOT
REPLACEMENT TELEPHONE HAS BEEN RETURNED PLEASE REMOVE YOUR REPAIRED TELEPHONE FROM THE TRAY
104
100
182

FIG. 6D


"LET'S SEE IF MY PHONE IS REALLY FIXED"
GREAT! ALL MY CONTACTS ARE STILL HERE!
BOB 555-678-9587
FRANK 555-654-1234
MARY 555-654-3456
"HI, BOB, MY TELEPHONE IS FIXED!"
100
102
104
182

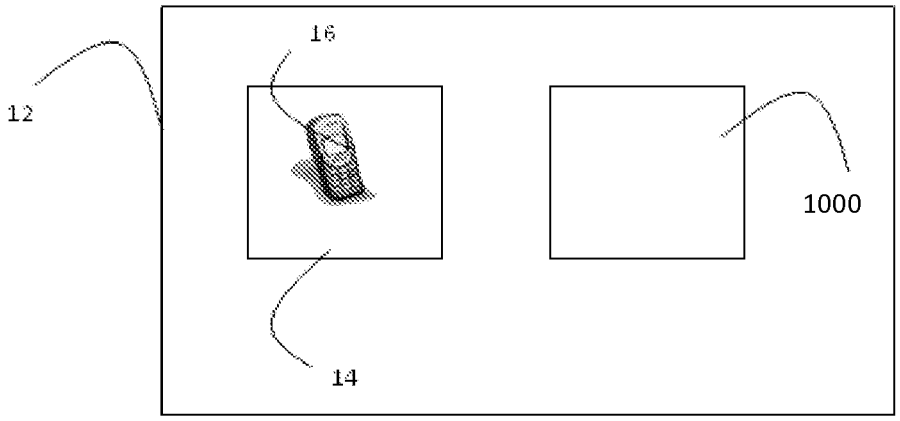


Fig. 7a

27/31

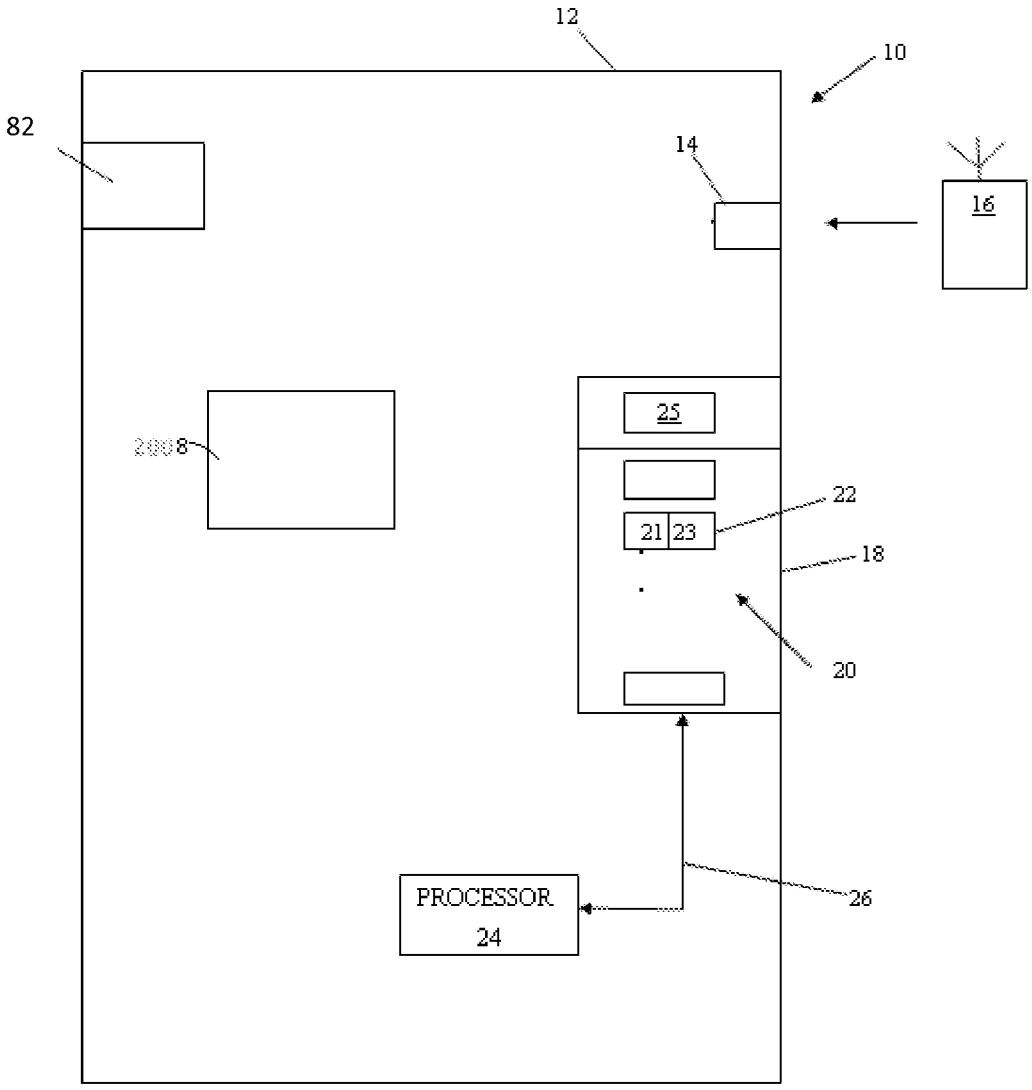


Fig. 7b

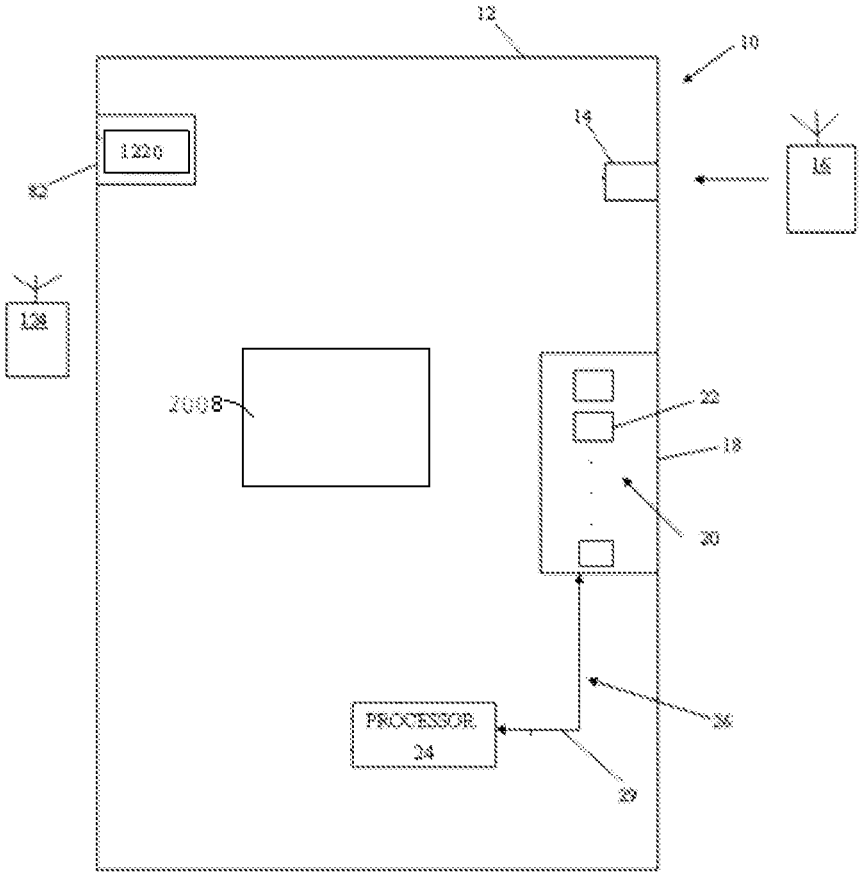


Fig. 8

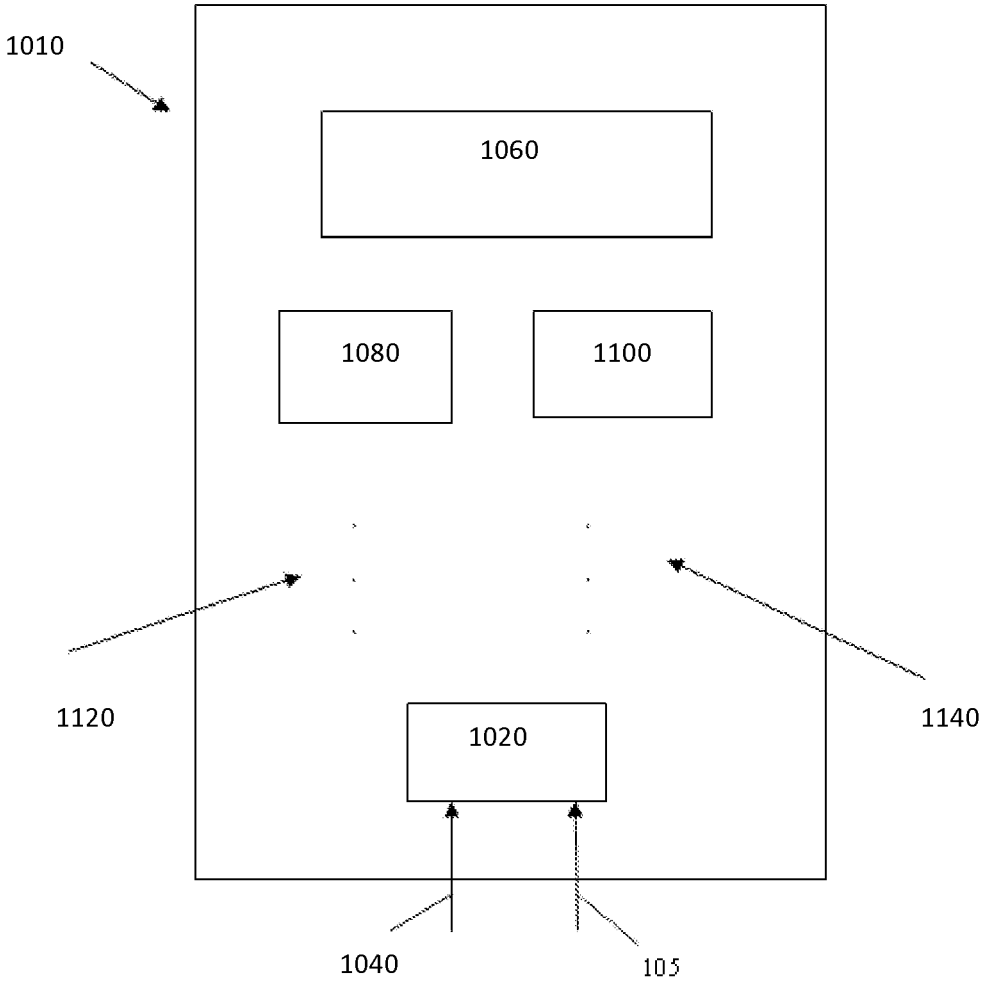


Fig. 9

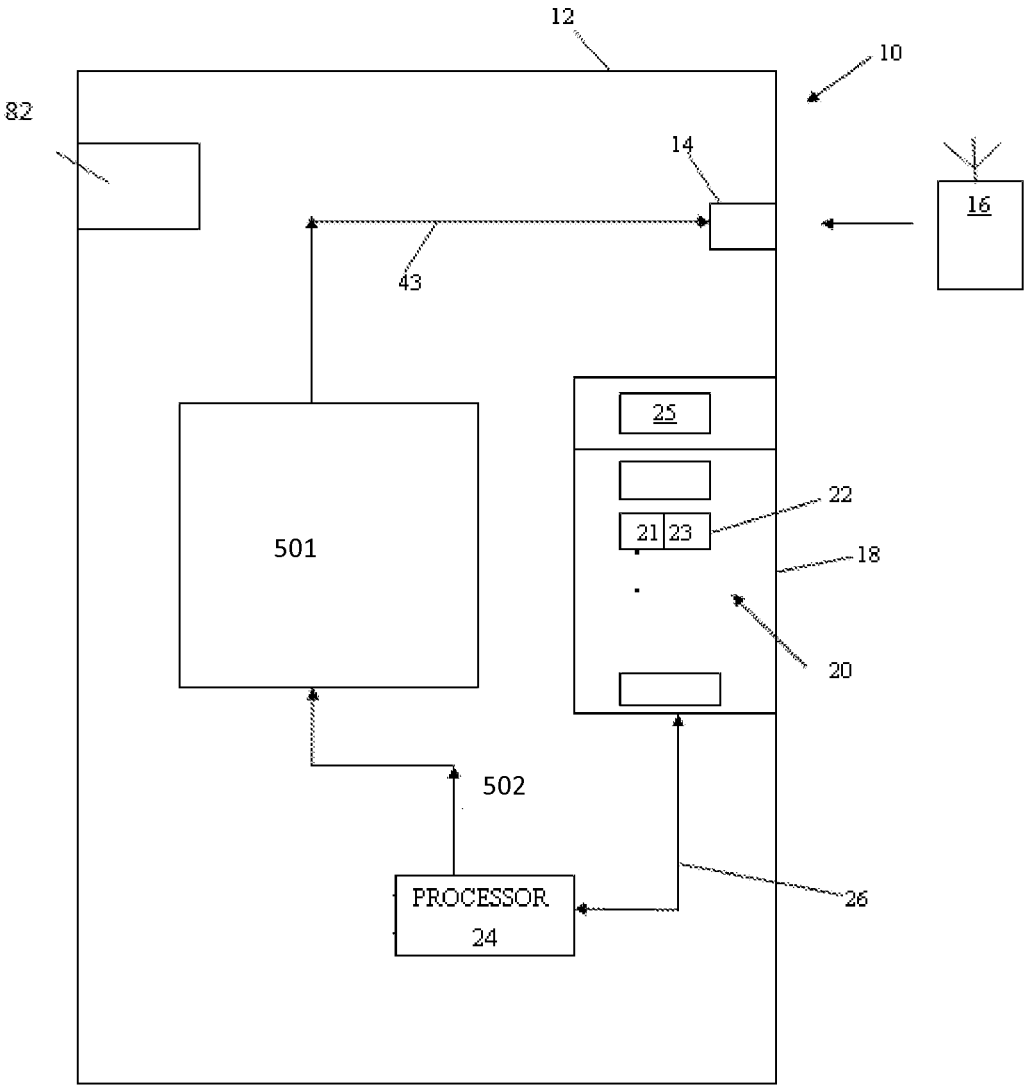


Fig. 10

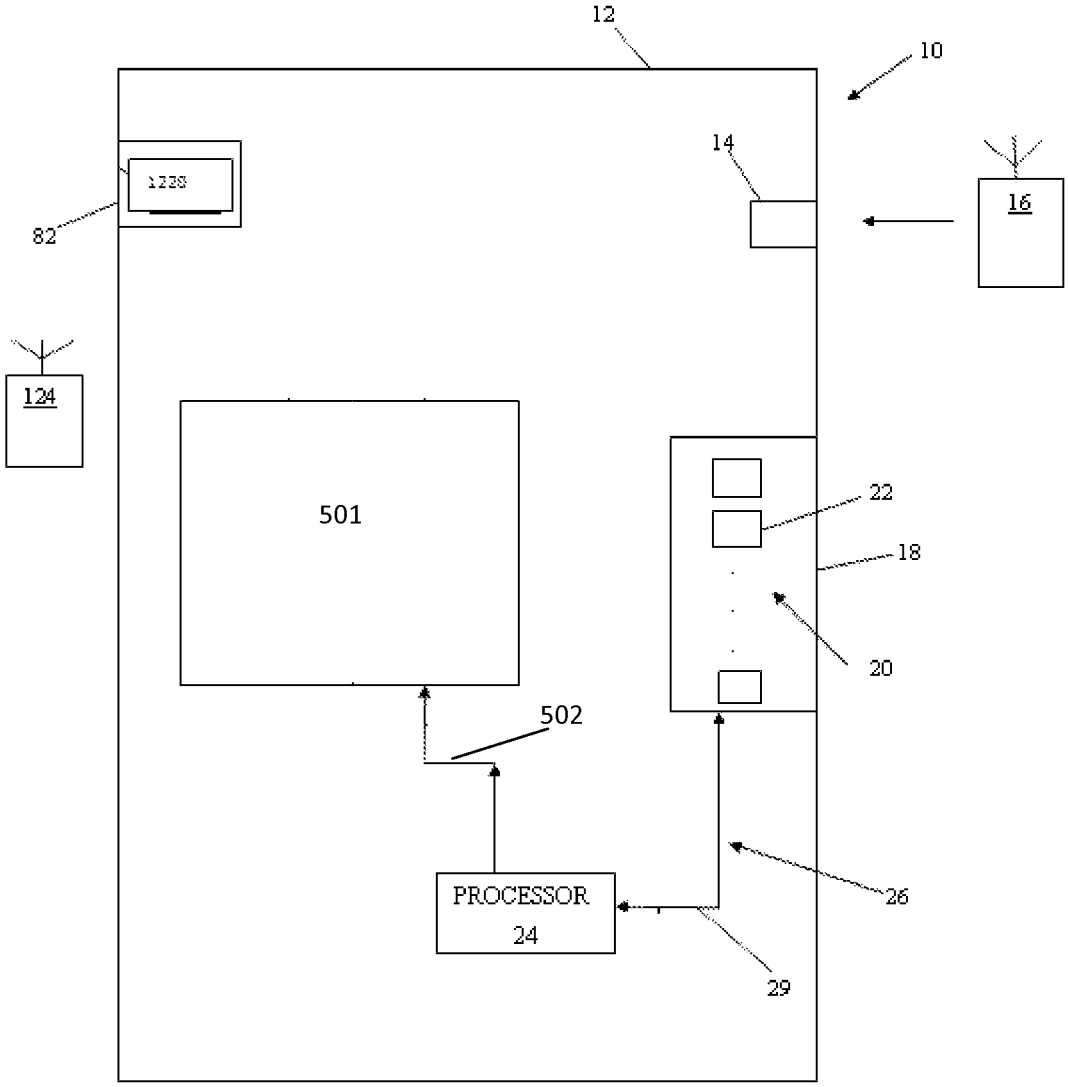


Fig. 11

RECEIVING MALFUNCTIONING MOBILE PHONE AND A DISPENSING FUNCTIONING CELLULAR TELEPHONE CONSOLE

FIELD OF THE INVENTION

This invention relates to a cellular mobile phone console (the automatic mobile communicator depot) for receiving, from a defined user, a malfunctioning cellular phone; and a dispensing said user with a functioning cellular telephone. The core concept behind the present invention is the ability to provide a user with the ability to track the malfunctioning cellular phone along its delivery cycle (i.e., the cycle at which the mobile communicators are going through. From the depositing at the automatic mobile communicator depot (the originating location) to the laboratories (for repair) and back to the automatic mobile communicator depot.

It should be pointed out that the automatic mobile communicator depot into which the mobile communicators were deposited does not have to be the automatic mobile communicator depot to which the mobile communicators are returned to (when repaired).

BACKGROUND OF THE INVENTION

In recent years, the number of mobile communicators in the hands of the public has increased greatly, thus creating a need for efficient logistics for handling and replacement thereof.

SUMMARY OF THE INVENTION

The present invention seeks to provide a user-friendly and a user-interactive cellular mobile phone replacement console, allowing a user to insert a malfunctioning mobile phone into the mobile phone console and receiving a replacement mobile phone from the cellular phone console. As the malfunctioning mobile phone is sent for repair, the present invention provides the owner of said malfunctioning mobile phone the ability to track the malfunctioning mobile phone during the course of its movement (from the console, the originating location, to the laboratories, for repair, and back to the owner).

The present invention seeks to provide an automatic mobile communicator depot system for tracking mobile communicators during a delivery cycle of the same. There is thus provided in accordance with a preferred embodiment of the present invention an automatic mobile communicator depot system including a mobile communicator acceptor for accepting mobile communicators and providing mobile communicator acceptance inputs, a mobile communicator dispenser for dispensing substitute mobile communicators in response to substitute mobile communicator dispensing instructions, a customer interface receiving customer inputs identifying a specific mobile communicator with a specific customer, and a depot controller responsive at least to the customer inputs and the acceptance inputs and including dispenser control functionality for providing dispensing instructions to the mobile communicator dispenser to dispense a specific substitute mobile communicator to a specific customer and automatic telephone number transfer functionality for transferring a telephone number from a mobile communicator received by the mobile communicator acceptor from a given customer to the substitute mobile communicator dispensed by the mobile communicator dispenser to the customer; tagging mechanism, adapted to dispense a plurality of tags; each of said tags being in communication with each of said mobile communicators received by said mobile communicator acceptor; said tag having machine readable indicia indicating an identification code for each of said mobile communicator, to which said tag has been in communication with; and a computerized tracking system in communication with a server, adapted to provide information as for the location of said mobile communicators by querying said server with said identification code said computerized tracking system is configured to: (i) to maintain a database of tracking data which reflects when each tag was scanned during said delivery cycle of said mobile communicator; (ii) to assign delivery destinations to each tag; (iii) to provide information as for the location of said mobile communicators by querying said server with said identification code.

Preferably, the tags are scanned at said delivery destinations.

Preferably, tags are physically coupled to said mobile communicators.

Preferably, each tag is scanned to determine date and time of arrival of each tag at a series of locations, wherein the multiple locations include the originating location of said mobile communicators, said delivery destinations.

Preferably, the originating location of said mobile communicators is the geographic location of said automatic mobile communicator depot.

Preferably, the tags are scanned at delivery destinations at an end of said delivery cycle and at the originating location of said mobile communicators at the beginning of said delivery cycle.

Preferably, one or more of said tags comprise a radio frequency identifier (RFID) tag.

Preferably, the mobile communicator acceptor is operative to accept from a customer a mobile communicator to be repaired and the mobile communicator dispenser is operative to dispense to the customer a temporary replacement mobile communicator to be used until the customer's mobile communicator is returned in a repaired state to the customer. Additionally or alternatively, the mobile communicator acceptor is operative to accept from a customer a mobile communicator to be replaced and the mobile communicator dispenser is operative to dispense to the customer a permanent replacement mobile communicator.

Preferably, the mobile communicator acceptor is also operative to accept from the customer the temporary replacement mobile communicator and the mobile communicator dispenser is operative to dispense the mobile communicator earlier received by the mobile communicator acceptor from the customer, to the customer in a repaired state. Additionally or alternatively, the mobile communicator acceptor is operative to accept from the customer a temporary replacement mobile communicator dispensed to the customer by a mobile communicator dispenser which is not the a mobile communicator dispenser, and the mobile communicator dispenser is operative to dispense the mobile communicator earlier received from the customer by a mobile communicator acceptor which is not the mobile communicator acceptor, to the customer in a repaired state.

Preferably, the automatic telephone number transfer functionality is operative for transferring the telephone number from the temporary replacement mobile communicator received by the mobile communicator acceptor from the customer to the mobile communicator dispensed to the customer in a repaired state.

Preferably, the depot controller also includes automatic data transfer functionality operable for transferring of data stored in a mobile communicator received by the mobile communicator acceptor from a given customer to the temporary substitute mobile communicator dispensed by the mobile

communicator dispenser to the customer. Preferably, the data includes at least part of a contact list. Preferably, the transferring of data is at least partly wireless. Preferably, the automatic data transfer functionality is also operable for transferring of data stored in the temporary substitute mobile communicator earlier received by the mobile communicator acceptor from a given customer to the mobile communicator dispensed to the customer in a repaired state.

Additionally or alternatively, the depot controller also includes automatic data transfer functionality operable for transferring of data of a given customer, the data stored in an internet accessible storage facility, to the temporary substitute mobile communicator dispensed by the mobile communicator dispenser to the customer. Preferably, the data includes at least part of a contact list. Preferably, the transferring of data is at least partly wireless.

Preferably, the depot system also includes a customer internet interface operable for receiving customer inputs identifying a specific mobile communicator with a specific customer via the internet. Preferably, the customer inputs include at least a telephone number of the specific mobile communicator. Preferably, the customer inputs include at least a description of a malfunction of the specific mobile communicator which needs to be repaired and a preferred future pickup location of the specific mobile communicator in a repaired state.

Preferably, the mobile communicator acceptor also includes imaging functionality for capturing an image of at least part of the specific mobile communicator.

Preferably, the mobile communicator acceptor also includes depot-service center communication functionality operative for communicating between the depot and at least one mobile communicator service center. Preferably, the depot-service center communication functionality is operable for communicating at least some of the customer inputs to the at least one mobile communicator service center.

Preferably, the mobile communicator acceptor is also operative to place the specific mobile communicator into a bin located within a mobile communicator storage and transport structure. Preferably, the depot-service center communication functionality is operable for communicating the identities of the bin and of the mobile communicator storage and transport structure to the at least one mobile communicator service center in association with a unique identifier of the specific mobile communicator.

Preferably, at least part of the identities of the bin and of the mobile communicator storage and transport structure are encoded in barcodes imprinted on respective ones of the bin and the mobile communicator storage and transport structure. Preferably, the depot system also includes barcode scanning functionality operable for reading the barcodes.

Preferably, the automatic telephone number transfer functionality is operative to employ the depot-service center communication functionality to employ the at least one mobile communicator service center for the transferring a telephone number.

Preferably, the mobile communicator dispenser is also operable for dispensing, to the customer, mobile communicator accessories suitable for use with the substitute mobile communicators to be used until the customer's mobile communicator is returned in a repaired state to the customer, and the mobile communicator acceptor is also operable for accepting, from the customer, the mobile communicator accessories earlier dispensed to the customer, upon return of the customer's mobile communicator in a repaired state to the customer. Preferably, the accessories include at least one of a mobile communicator charger and a data synchronizing cable.

Preferably, the mobile communicator storage and transport structure is operable for removal thereof from the depot and for transport between the depot and the mobile communicator service center.

Preferably, the depot also includes customer messaging functionality operative to notify the customer that his mobile communicator has been repaired and will be available for pickup at a specific automatic mobile communicator depot at a specific time. Additionally or alternatively, the depot also includes customer messaging functionality operative to notify the customer that his mobile communicator has been repaired and is available for pickup at a specific automatic mobile communicator depot.

There is also provided in accordance with another preferred embodiment of the present invention a method for tracking mobile communicators deposited in an automatic mobile communicator depot during a delivery cycle of the same, including accepting mobile communicators and providing mobile communicator acceptance inputs, assigning at least one tag to each of said mobile communicators accepted to said automatic mobile communicator depot; thereby each of said mobile communicators is provided with a machine readable indicia indicating an identification code, assigning a delivery destinations to each of said tags by using the computerized tracking system, dispensing substitute mobile communicators in response to substitute mobile communicator dispensing instructions, receiving customer inputs identifying a specific mobile communicator with a specific customer, and responsive at least to the customer inputs and the acceptance inputs, providing dispensing instructions to the mobile communicator dispenser to dispense a specific substitute mobile communicator to a specific customer, automatically transferring a telephone number from a mobile communicator received by the mobile communicator acceptor from a given customer to the substitute mobile communicator dispensed by the mobile communicator dispenser to the customer, and querying a server with said identification code; thereby tracking said mobile communicators.

Preferably, the method as described above, additionally comprising step of maintaining a database of tracking data which reflects when each tag was scanned during said delivery cycle of said mobile communicator.

Preferably, the tags are physically coupled to said mobile communicators.

Preferably, the method as described above, additionally comprising step of transporting said mobile and said tags to said delivery destinations.

Preferably, the method as described above, additionally comprising steps of repeating steps (b-c) of: (b) assigning at least one tag to each of said mobile communicators accepted to said automatic mobile communicator depot; thereby each of said mobile communicators is provided with a machine readable indicia indicating an identification code; (c) assigning a delivery destinations to each of said tags by using the computerized tracking system; wherein said steps are repeated until said mobile communicators arrives said delivery destinations at the end of said delivery cycle.

Preferably, the method as described above, additionally comprising steps of repeating step (h) of querying a server with said identification code; thereby tracking said mobile communicators.

Preferably, the method as described above, additionally comprising step of scanning each tag to determine date and time of arrival to said delivery destinations.

Preferably, the method as described above, additionally comprising step of scanning each tag to determine date and time of arrival of each tag at a series of locations, wherein the multiple locations include the originating location of said mobile communicators, said delivery destinations.

Preferably, the originating location of said mobile communicators is the geographic location of said automatic mobile communicator depot.

Preferably, the method as described above, additionally comprising step of re-assigning a delivery destinations to said mobile communicators.

Preferably, the tags are scanned at delivery destinations at an end of said delivery cycle and at the originating location of said mobile communicators at the beginning of said delivery cycle.

Preferably, one or more of said tags comprise a radio frequency identifier (RFID) tag.

Preferably, the method as described above, additionally comprising step of informing the owner of said mobile communicators that said mobile communicators has arrived said delivery destinations.

Preferably, the step of informing is performed by sending said owner an SMS or an email.

Preferably, accepting mobile communicators includes accepting from a customer a mobile communicator to be repaired, and dispensing substitute mobile communicators includes dispensing to the customer a temporary replacement mobile communicator to be used until the customer's mobile communicator is returned in a repaired state to the customer. Additionally or alternatively, accepting mobile communicators includes accepting from a customer a mobile communicator to be replaced, and dispensing substitute mobile communicators includes dispensing to the customer a permanent replacement mobile communicator.

Preferably, accepting mobile communicators includes accepting from the customer the temporary replacement mobile communicator, and dispensing substitute mobile communicators includes dispensing the mobile communicator earlier received from the customer, to the customer in a repaired state.

Preferably, the transferring includes automatically transferring the telephone number from the temporary replacement mobile communicator received from the customer to the mobile communicator dispensed to the customer in a repaired state.

Preferably, the method also includes automatically transferring data stored in a mobile communicator received from a given customer to the temporary substitute mobile communicator dispensed to the customer. Preferably, the data includes at least part of a contact list. Preferably, the transferring of data is at least partly wireless. Preferably, the method also includes automatically transferring data stored in the temporary substitute mobile communicator earlier received from the given customer to the mobile communicator dispensed to the customer in a repaired state.

Additionally or alternatively, the method also includes automatically transferring data of a given customer, the data stored in an internet accessible storage facility, to the temporary substitute mobile communicator dispensed to the customer. Preferably, the data includes at least part of a contact list. Preferably, the transferring of data is at least partly wireless.

Preferably, the method also includes receiving customer inputs identifying a specific mobile communicator with a specific customer via the internet.

Preferably, the customer inputs include at least a telephone number of the specific mobile communicator. Preferably, the customer inputs include at least a description of a malfunction of the specific mobile communicator which needs to be repaired and a preferred future pickup location of the specific mobile communicator in a repaired state.

Preferably, the method also includes capturing an image of at least part of the specific mobile communicator. Preferably, the method also includes communicating between the depot and at least one mobile communicator service center. Preferably, the communicating includes communicating at least some of the customer inputs to the at least one mobile communicator service center.

Preferably, the method also includes placing the specific mobile communicator into a bin located within a mobile communicator storage and transport structure. Preferably, the communicating includes communicating the identities of the bin and of the mobile communicator storage and transport structure to the at least one mobile communicator service center in association with a unique identifier of the specific mobile communicator.

Preferably, at least part of the identities of the bin and of the mobile communicator storage and transport structure are encoded in barcodes imprinted on respective ones of the bin and the mobile communicator storage and transport structure.

Preferably, the method also includes dispensing, to the customer, mobile communicator accessories suitable for use with the substitute mobile communicators to be used until the customer's mobile communicator is returned in a repaired state to the customer, and accepting, from the customer, the mobile communicator accessories earlier dispensed to the customer, upon return of the customer's mobile communicator in a repaired state to the customer. Preferably, the accessories include at least one of a mobile communicator charger and a data synchronizing cable.

Preferably, the mobile communicator storage and transport structure is operable for removal thereof from the depot and for transport between the depot and the mobile communicator service center.

Preferably, the method also includes notifying the customer that his mobile communicator has been repaired and will be available for pickup at a specific automatic mobile communicator depot at a specific time. Additionally or alternatively, the method also includes notifying the customer that his mobile communicator has been repaired and is available for pickup at a specific automatic mobile communicator depot.

It is another object of the present invention to provide the automatic mobile communicator depot system as defined above, additionally comprising at least one identification mechanism adapted to identify said user.

It is another object of the present invention to provide the automatic mobile communicator depot system as defined above, additionally comprising at least one identification mechanism adapted to identify said malfunctioned cellular phones received.

It is another object of the present invention to provide the automatic mobile communicator depot system as defined above, wherein said identification mechanism is adapted to identify at least one selected from a group consisting of the model of said malfunctioned cellular phones received, the producer of said malfunctioned cellular phones received, the phone number of said user, the I.D. number of said user, the address of said user, the email of said user and any combination thereof.

It is another object of the present invention to provide the automatic mobile communicator depot system as defined

above, additionally comprising means adapted to enable the back-up of information contained within said malfunctioned cellular phones received.

It is another object of the present invention to provide the automatic mobile communicator depot system as defined above, additionally comprising means adapted to diagnose said malfunctioned phone.

It is another object of the present invention to provide the automatic mobile communicator depot system as defined above, wherein said mobile communicator tagged with radio frequency identification (RFID).

It is another object of the present invention to provide the automatic mobile communicator depot system as defined above, additionally comprising at least one camera adapted to identify said user.

It is another object of the present invention to provide the automatic mobile communicator depot system as defined above, additionally comprising means adapted to dispense at least one receipt once said malfunctioning cellular phone is received within said cellular phone station.

It is another object of the present invention to provide the automatic mobile communicator depot system as defined above, wherein said at least one receipt comprising at least one detail selected from a group consisting of details of said mobile communicator, detail on said user, the malfunction itself, detail on the date and time at which the mobile communicator has been deposited, and an identification number in case said mobile communicator is lost; and any combination thereof.

It is another object of the present invention to provide the automatic mobile communicator depot system as defined above, wherein said details of said mobile communicator is selected from a group consisting of type of said mobile communicator, phone number of said mobile communicator and any combination thereof.

It is another object of the present invention to provide the automatic mobile communicator depot system as defined above, wherein said detail on said user is selected from a group consisting of name of said user, ID of said user, address of said user, reachable number of said user and any combination thereof.

It is another object of the present invention to provide the method as defined above, additionally comprising step of dispensing at least one receipt once said mobile communicator is received.

It is another object of the present invention to provide the method as defined above, wherein said at least one receipt comprising at least one detail selected from a group consisting of details of said mobile communicator, detail on said user, the malfunction of said mobile communicator, and an identification number in case said mobile communicator is lost, detail on the date and time at which the mobile communicator has been deposited, and any combination thereof.

It is another object of the present invention to provide the method as defined above, wherein said details of said mobile communicator is selected from a group consisting of type of said mobile communicator, phone number of said mobile communicator and any combination thereof.

It is another object of the present invention to provide the method as defined above, wherein said detail on said user is selected from a group consisting of name of said user, ID number of said user, address of said user, reachable number of said user and any combination thereof.

It is another object of the present invention to provide the method as defined above, wherein said details of said mobile communicator is selected from a group consisting of type of said mobile communicator, phone number of said mobile communicator and any combination thereof.

It is another object of the present invention to provide the method as defined above, wherein said detail on said user is selected from a group consisting of name of said user, ID of said user, address of said user, reachable number of said user and any combination thereof.

It is another object of the present invention to provide the automatic mobile communicator depot system as defined above, additionally comprising means adapted to identify the IMEI of said mobile communicator.

It is another object of the present invention to provide the method as defined above, additionally comprising step of identifying the IMEI of said mobile communicator.

It is another object of the present invention to provide the automatic mobile communicator depot system as defined above, additionally comprising means adapted to wirelessly identify the IMEI of said mobile communicator.

It is another object of the present invention to provide the method as defined above, additionally comprising step of wirelessly identifying the IMEI of said mobile communicator.

BRIEF DESCRIPTION OF THE DRAWINGS

A preferred embodiment of the current invention is described hereinbelow with reference to the following drawings:

FIGS. **1**A, **1**B and **1**C are simplified illustrations of three examples of an initial stage of mobile communicator depot methodology in accordance with a preferred embodiment of the present invention;

FIGS. **2**A, **2**B and **2**C together are a simplified illustration of an automatic acceptance processing of a customer's mobile communicator stage of mobile communicator depot methodology in accordance with a preferred embodiment of the present invention;

FIGS. **2**D-**2**E illustrates the tagging mechanism and the identification code for enabling the user (customer) to track his/her mobile communicator;

FIGS. **3**A, **3**B, **3**C, **3**D, **3**E, **3**F and **3**G together are a simplified illustration of a replacement mobile communicator personalization and dispensing stage of mobile communicator depot methodology in accordance with a preferred embodiment of the present invention;

FIGS. **4**A, **4**B, **4**C, **4**D, **4**E and **4**F together are a simplified illustration of a back-end processing stage of mobile communicator depot methodology in accordance with a preferred embodiment of the present invention;

FIGS. **5**A and **5**B together are a simplified illustration of a replacement mobile communicator return stage of mobile communicator depot methodology in accordance with a preferred embodiment of the present invention; and

FIGS. **6**A, **6**B, **6**C and **6**D together are a simplified illustration of replacement mobile communicator acceptance, validation and depersonalization functionality and customer's mobile communicator repersonalization and dispensing functionality in accordance with a preferred embodiment of the present invention.

FIGS. **7***a* and *b* show features of a cellular phone console, in accordance with one embodiment of the present invention;

FIG. **8** shows further features of the console, in accordance with one embodiment of the present invention;

FIG. **9** shows a front panel of the user interactive unit, in accordance with one embodiment of the present invention,

FIGS. **10-11** illustrate another embodiment of the present invention in which a repair certificate mechanism (e.g., printer) is illustrated.

DETAILED DESCRIPTION OF THE INVENTION

In the following description, various aspects of the invention will be described. For the purposes of explanation, specific details are set forth in order to provide a thorough understanding of the invention. It will be apparent to one skilled in the art that there are other embodiments of the invention that differ in details without affecting the essential nature thereof. Therefore the invention is not limited by that which is illustrated in the figures and described in the specification, but only as indicated in the accompanying claims, with the proper scope determined only by the broadest interpretation of said claims.

This invention relates to a cellular mobile phone console for receiving, from a defined user, a malfunctioning cellular phone; and a dispensing said user with a functioning cellular telephone. The core concept behind the present invention is the ability to provide a user with the ability to track the malfunctioning cellular phone along its delivery cycle (from the original depositing location, to the laboratories for repair and back to the user).

It should be emphasized that the dispensed functioning cellular telephone dispensed from the console (at the time the malfunctioned cellular phone is deposited to the same) is not necessarily the received malfunctioned cellular phone; furthermore, it should be emphasized that the dispensed functioning cellular telephone could be from a different model than the received malfunctioned cellular phone.

The core concept behind the present invention is the ability to receive, from a defined user, a malfunctioning cellular phone; and to dispense said user with a functioning cellular telephone; whilst enabling the user to track his/her malfunctioning cellular phone along its delivery cycle (from the original depositing location, to the laboratories for repair and back to the user).

The present invention also provides an automatic mobile communicator depot system and methodology. There is thus provided in accordance with a preferred embodiment of the present invention an automatic mobile communicator depot system including a mobile communicator acceptor for accepting mobile communicators and providing mobile communicator acceptance inputs, a mobile communicator dispenser for dispensing substitute mobile communicators in response to substitute mobile communicator dispensing instructions, a customer interface receiving customer inputs identifying a specific mobile communicator with a specific customer, and a depot controller responsive at least to the customer inputs and the acceptance inputs and including dispenser control functionality for providing dispensing instructions to the mobile communicator dispenser to dispense a specific substitute mobile communicator to a specific customer and automatic telephone number transfer functionality for transferring a telephone number from a mobile communicator received by the mobile communicator acceptor from a given customer to the substitute mobile communicator dispensed by the mobile communicator dispenser to the customer.

It should be pointed out that the telephone number of the substitute mobile communicator dispensed by said mobile communicator dispenser to said customer may be identical to the telephone number of the mobile communicator received by said mobile communicator acceptor or may be different.

The term "delivery cycle" refers hereinafter as the cycle at which the mobile communicators are going through. From the depositing at the automatic mobile communicator depot (the originating location) to the laboratories (for repair) and back to the automatic mobile communicator depot (or directly to the customer).

It should be pointed out that the automatic mobile communicator depot into which the mobile communicators were deposited does not have to be the automatic mobile communicator depot to which the mobile communicators are returned to (when repaired).

The term "IMEI" refers hereinafter to International Mobile Equipment Identity (IMEI), and is a unique number that each phone has. The IMEI is used to identify a correct pairing of a phone and SIM card. The IMEI is a unique 17 or 15 digit code used to identify an individual mobile station to a GSM or UMTS network. The IMEI number provides an important function; it uniquely identifies a specific mobile phone being used on a mobile network. The IMEI is a useful tool to prevent a stolen handset from accessing a network and being used to place calls. Mobile phone owners who have their phones stolen can contact their mobile network provider and ask them disable a phone using its IMEI number. With an IMEI number, the phone can be blocked from the network quickly and easily.

IMEI numbers either come in a 17 digit or 15 digit sequences of numbers. The IMEI format currently utilized is AA-BBBBBB-CCCCCC-D:

AA: These two digits are for the Reporting Body Identifier, indicating the GSMA (Global System for Mobile Communications Association) approved group that allocated the TAC (Type Allocation Code).

BBBBBB: The remainder of the TAC

CCCCCC: Serial sequence of the Model

D: a check digit of the entire model or 0 (This is an algorithm that validates the ID number).

It is within the core concept of the present invention to provide the automatic mobile communicator depot system as will be disclosed hereinafter, additionally comprising means adapted to either wirelessly or with appropriate wires and hardware identify the IMEI of said mobile communicator.

According to one embodiment of the present invention the system can identify the IMEI of said mobile communicator so as to verify whether the mobile communicator is still under the supplier's\manufacturer warranty or not.

According to one embodiment of the present invention the system can identify the IMEI of said mobile communicator so as to verify whether the mobile communicator is a stolen mobile communicator.

The term "SIM" refers hereinafter to a Subscriber Identity Module (SIM).

Reference is now made to FIGS. **1**A, **1**B and **1**C, which are simplified illustrations of three examples of an initial stage of mobile communicator depot methodology in accordance with a preferred embodiment of the present invention. Turning to FIG. **1**A, there is shown a scenario wherein a customer, whose mobile communicator **100**, here a smartphone, is broken, initiates a repair over the internet such as by using his home computer to access the customer service website of cellular telephone service provider.

Typically the customer identifies himself to the customer service website by entering his mobile communicator telephone number and a unique identifier, such as the last four digits of his credit card. The customer may then select the Automated Telephone Repair Service and is then prompted to describe the problem with his mobile communicator **100**, such as a broken screen. It is appreciated that once the cus-

tomer enters the telephone number of mobile communicator **100**, the system already has information regarding the identity, type and functionality of mobile communicator **100**.

The customer is preferably directed to the nearest repair depot **102** and may be shown its location on a map.

Upon arrival at the repair depot **102**, the customer is prompted to identify himself and his mobile communicator **100** by entering his mobile communicator telephone number and a unique identifier, such as the last four digits of his credit card.

Turning to FIG. **1**B, there is shown an alternative scenario wherein a customer, whose mobile communicator **100**, here a smartphone, is broken, initiates a repair over the internet such as by using another mobile communicator **103**, such as an iPAD to access the customer service website of cellular telephone service provider.

Typically the customer identifies himself by entering his mobile communicator telephone number and a unique identifier, such as the last four digits of his credit card. The customer may then select the Automated Telephone Repair Service and is then prompted to describe the problem with his mobile communicator **100**, such as a broken screen. It is appreciated that once the customer enters the telephone number of mobile communicator **100**, the system already has information regarding the identity, type and functionality of mobile communicator **100**.

The customer is preferably directed to the nearest repair depot **102** and may be shown its location on a map.

Upon arrival at the repair depot **102**, the customer is prompted to identify himself and his mobile communicator by entering his mobile communicator telephone number and a unique identifier, such as the last four digits of his credit card.

Turning to FIG. **1**C, there is shown a scenario wherein a customer, whose mobile communicator **100**, here a smartphone, is broken, is unable to initiate a repair over the internet, since he does not have access to the internet. In such a case, the customer may go directly to a repair depot **102**.

Typically the repair depot **102** interacts directly with the customer and prompts the customer to identify himself by entering his mobile communicator telephone number and a unique identifier, such as the last four digits of his credit card. The customer is then prompted to describe the problem with his mobile communicator, such as a broken screen. It is appreciated that once the customer enters the telephone number of mobile communicator **100**, the system already has information regarding the identity, type and functionality of mobile communicator **100**.

Reference is now made to FIGS. **2**A, **2**B and **2**C, which together are a simplified illustration of an automatic acceptance processing of a customer's mobile communicator stage of mobile communicator depot methodology in accordance with a preferred embodiment of the present invention. As seen in FIG. **2**A, upon arrival at depot **102**, a customer is prompted to place his mobile communicator **100** in a receiving receptacle **104**.

It is appreciated that according to another embodiment of the present invention, the automatic mobile communicator depot system will be provided with means adapted to identify the IMEI of said mobile communicator **100** as well as (or alternatively) the mobile communicator's **100** SIM card.

According to one embodiment of the present invention the system can identify the IMEI of said mobile communicator so as to verify whether the mobile communicator is still under the supplier's\manufacturer warranty or not.

According to one embodiment of the present invention the system can identify the IMEI of said mobile communicator so as to verify whether the mobile communicator is a stolen mobile communicator.

As shown in FIG. **2**B, depot **102** preferably includes functionality for confirming that mobile communicator **100** is placed in the receptacle **104** with its screen **106** facing upwards and also includes a camera **108** for photographing the top surface of mobile communicator **100**, the top surface including screen **106**.

A robotic mechanism **110** is preferably employed for initially repositioning the receptacle **104** containing mobile communicator **100** from its initial position, shown in FIG. **2**A, at which the customer placed mobile communicator **100** therein, to a second position, shown in FIG. **2**B at which the top surface of mobile communicator **100** is photographed by camera **108**, to a third position in which mobile communicator is disposed within one of a multiplicity of bins **112**, each of which is preferably identified by a barcode **114** and which are located in a storage and transport structure **116**.

A barcode scanner **118** is preferably mounted on robotic mechanism **110** for reading barcode **114** of bin **112** in which the customer's mobile communicator **100** is placed, for recording the identity of bin **112** and for associating it with the identity of customer's mobile communicator **100** in a computerized database.

At this stage, a tagging mechanism dispenses a tag **2000** (i.e., a barcode) to be attached to said mobile communicator **100** (see FIG. **2**D).

The tag **200** has a machine readable indicia indicating an identification code **2001** for each of said mobile communicator **100**.

It should be emphasized that according to another embodiment of the present invention the tag **2000** is the IMEI of said mobile communicator **100**. It should be noted that according to this embodiment, the IMEI is provided to the used (customer) to enable the same to track the mobile communicator **100**.

It should be pointed that the reading barcode **114** could be used as the identification code **2001**.

As shown in FIG. **2**C, a virtual repair ticket **120** is preferably generated. Virtual repair ticket **120** preferably includes the customer's mobile communicator telephone number, the bin number of the bin in which mobile communicator **100** is disposed, and a description of the required repair as provided by the customer and the machine readable indicia (and\or the identification code **2001**).

The virtual repair ticket **120** is preferably transmitted via the internet to a central server **122**, typically located at a site remote from depot **102**, which site may house a repair center.

The customer receives an acknowledgement of receipt of the deposited mobile communicator **102**, preferably in the form of an audio-visual message which is backed up by a virtual email message and preferably is prompted to select a preferred pick up location, which need not be the same depot **102**. Upon receipt of a user pick up location selection input, the depot **102** preferably provides an acknowledgement, preferably in the form of an audio-visual message which is backed up by a virtual email message.

Once the machine readable indicia (and\or the identification code **2001**) has been issued, the user can track his/her mobile communicator **100** through its delivery cycle (from the automatic mobile communicator depot system, the originating location), to the repairing laboratory and back to client.

Thus, the user can track his/her mobile communicator's **100** exact position and estimate the approx. time the mobile communicator's **100** will be repaired and back to him/her.

In order to track the mobile communicator **100**, the user will log into a dedicated website in which he/she will enter the identification code **2001**. Once the identification code **2001** has been entered, a computerized tracking system **2003** (see FIG. **2**E) will provide information as for the location of said mobile communicators by querying **2005** a server **2004** with said identification code **2001**. The server will provide **2006** information as for the location of the mobile communicator **100**.

i.e., the user will be able to (when tracking his/her mobile communicator's **100**) to get messages e.g., like "the mobile communicator has been received in the automatic mobile communicator depot"; "the mobile communicator is on its way to the laboratories"; "the mobile communicator has been received in the laboratories"; "the mobile communicator has left the laboratories"; "the mobile communicator is on its way back to the automatic mobile communicator depot located in the following address . . . "; "the mobile communicator is on its way back to the user".

The computerized tracking system **2003** is configured to:

(a) to assign delivery destinations to each tag;

(b) to maintain a database of tracking data which reflects when each tag was scanned during the delivery cycle of said mobile communicator. Each scan indicates that the mobile communicator **100** has arrived the location at which the same has been scanned.

(c) to provide information as for the location of said mobile communicators by querying said server with said identification code.

Reference is now made to FIGS. **3**A, **3**B, **3**C, **3**D, **3**E, **3**F and **3**G, which together are a simplified illustration of a replacement mobile communicator personalization and dispensing stage of mobile communicator depot methodology in accordance with a preferred embodiment of the present invention. As shown in FIGS. **3**A-**3**G, it is a particular feature of the present invention that, upon request by the customer, a replacement mobile communicator is automatically provided to the customer by the depot.

As shown in particular in FIG. **3**A, depot **102** offers the customer a replacement mobile communicator to be used while his broken mobile communicator is being repaired. As further shown in FIG. **3**B, upon accepting the offer, the customer is then asked by depot **102** whether he would prefer that his contact list be transferred to the replacement mobile communicator.

Thereafter, as shown in FIG. **3**C, depot **102** selects a replacement communicator bin **130** which is located in a replacement communicator storage and transport structure **132** and which contains a replacement mobile communicator, and preferably employs barcode scanner **118** which is preferably mounted on robotic mechanism **110** to read the barcode **136** of bin **130**.

As further shown in FIG. **3**C, a virtual mobile communicator activation instruction **140** is preferably generated by depot **102**, which instruction **140** preferably includes the customer's mobile communicator telephone number and the bin number of bin **130** retrieved from barcode **136**. Instruction **140** is preferably transmitted via the internet to a central server **122**, typically located at a site remote from depot **102**, which site may house a service center. It is appreciated that server **122** stores information for associating bin numbers of bins in replacement communicator storage and transport structure **132** with identifiers of mobile communicators stored therewithin. Therefore, server **122** may utilize the information in instruction **140** to associate the customer's mobile communicator telephone number with the identifier of the replacement mobile communicator located in bin **130**, and to store this information for ascertaining, upon return of repaired mobile communicator **100** to the customer, that the replacement mobile communicator dispensed to the customer is indeed returned.

Responsive to instruction **140**, server **122** preferably activates the replacement mobile communicator located in bin **130** in association with the customer's mobile communicator telephone number.

As yet further shown in FIG. **3**C, depot **102** then generates a virtual contact list synchronization instruction **150**, which instruction **150** preferably includes the customer's/mobile communicator's identifier and the bin number of bin **130** retrieved from barcode **136**. Instruction **150** is preferably transmitted via the internet to central server **122** and instructs server **122** to download the customer's contact list to depot **102**. It is appreciated that contact lists stored on mobile communicators are typically also stored on the internet on various backup facilities, such as, for example, on a central backup server of the cellular telephone service provider, and therefore may be accessible to server **122**.

As yet further shown in FIG. **3**C, upon receiving virtual contact list synchronization instruction **150**, server **122** preferably transmits the customer's contact list **160** to depot **102** where it is temporarily stored.

Turning now to FIG. **3**D, it is shown that robotic mechanism **110** is preferably employed for retrieving replacement mobile communicator **162** from bin **130**. Preferably, after replacement mobile communicator **162** is retrieved, depot **102** loads contact list **160** onto mobile communicator **162** preferably by wirelessly communicating therewith. It is appreciated that communication between depot **102** and replacement mobile communicator **162** may alternatively be wired.

Thereafter, as shown in FIG. **3**E, robotic mechanism **110** preferably places replacement mobile communicator **162** into receptacle **104**, and also preferably places a compatible mobile communicator accessory kit **164** into a dispenser bin **166**. It is appreciated that mobile communicator accessory kit **164** may include, for example, a mobile communicator charger and data synchronizing cables.

Turning now to FIG. **3**F, is shown that depot **102** thereafter notifies the customer that a replacement mobile communicator having his contact list loaded thereupon has been prepared for him, and prompts the customer to remove replacement mobile communicator **162** and mobile communicator accessory kit **164** from receptacle **104** and bin **166**, respectively. As further shown in FIG. **3**G, after retrieving replacement mobile communicator **162** and mobile communicator accessory kit **164**, the customer ascertains that replacement mobile communicator **162** is loaded with his contact list, and that replacement mobile communicator **162** is fully functional.

Reference is now made to FIGS. **4**A, **4**B, **4**C, **4**D, **4**E and **4**F, which together are a simplified illustration of a back-end processing stage of mobile communicator depot methodology in accordance with a preferred embodiment of the present invention. As shown in FIG. **4**A, a mobile communicator depot service employee arrives at depot **102** and removes storage and transport structure **116** from depot **102**. As described hereinabove with regard to FIG. **2**A, storage and transport structure **116** preferably comprises bins **112**, each of bins **112** preferably containing a mobile communicator destined for repair.

As further shown in FIG. **4**A, after removing storage and transport structure **116** from depot **102**, the depot service employee inserts an alternative storage and transport structure **170** into depot **102**, transport structure **170** preferably having repaired mobile communicators disposed in bins

therewithin. The method by which mobile communicators are repaired and disposed within transport structure **170** will be described in greater detail hereinbelow with regard to FIGS. **4**B-**4**E.

As yet further shown in FIG. **4**A, after inserting alternative storage and transport structure **170** into depot **102**, the depot service employee removes storage and transport structure **116** from the premises and, as shown in FIG. **4**B, delivers storage and transport structure **116** to a mobile communicator service center.

Turning now to FIG. **4**B, it is shown that a mobile communicator service center employee receives storage and transport structure **116** from the depot service employee and preferably scans the barcode of each of bins **112** (and the identification code **2001**) which contains a broken mobile communicator into a computer **172**.

It is appreciated that once said identification code **2001** is scanned, the server **2004** is now updated (and thus, the database of the computerized tracking system **2003**) that the mobile communicator **100** has been received by the mobile communicator service center employee and was taken out of the automatic mobile communicator depot system.

Now, if the user will try to track the location of the mobile communicator **100** (by entering the identification code **2001**), the computerized tracking system **2003** will inform the same as for the updated location of the mobile communicator **100**.

According to one embodiment of the present invention, the user is notified automatically of any movement of the mobile communicator **100**.

It is further appreciated that computer **172** preferably communicates with server **122** and is operative to retrieve information associated with broken mobile communicator **100** which was submitted to server **122** via a virtual repair ticket, such as virtual repair ticket **120** of FIG. **2**C. As described hereinabove with regard to FIG. **2**C, this information may include, for example, a bin identification number of the bin **112** containing broken mobile communicator **100**, a mobile communicator customer identifier such as a telephone number, and a description of the required repair. The information also preferably includes an identifier of the particular depot at which mobile communicator was deposited and an identifier of the preferred pickup location of the repaired mobile communicator as, for example, specified by the customer in the illustration of FIG. **2**C.

As yet further shown in FIG. **4**B, after retrieving the information of virtual repair ticket **120** from computer **172**, the service center employee retrieves mobile communicator **100** from its bin **112** and repairs mobile communicator **100**.

It is appreciated that while being repaired, the contact list stored in mobile communicator **100** may be partially or completely deleted. The contact list may have also been partially or completely deleted upon breakage of mobile communicator **100**. Therefore, as shown in FIG. **4**C, the service center employee preferably utilizes computer **172** to access server **122** to download the customer's contact list **160** to computer **172** in preparation for reactivation of mobile communicator **100**. As described hereinabove with regard to the illustration of FIG. **3**C, it is appreciated that mobile communicator contact lists are typically also stored on the internet on various backup facilities, such as, for example, on a central backup server of the cellular telephone service provider, and therefore may be accessible to server **122**.

As further shown in FIG. **4**C, the service center employee preferably loads contact list **160** onto mobile communicator **100** by wirelessly transmitting contact list **160** from computer **172** to mobile communicator **100**. Alternatively, transmission of the contact list from computer **172** to mobile communicator **100** may be wired.

Turning now to FIG. **4**D, it is shown that after completing the repair of mobile communicator **100** and loading contact list **160** onto repaired mobile communicator **100**, the service center employee then preferably utilizes computer **172** to generate a virtual delivery ticket **176** for repaired mobile communicator **100**, which ticket **176** preferably includes a physical identifier of communicator **100**, such as an IMEI identifier. It is appreciated that the physical identifier may be retrieved from communicator **100**, for example, by scanning a barcode embedded in communicator **100** or by manually querying communicator **100** via its user interface.

Preferably, the service center employee also scans a barcode identifier **178** of bin **174** into computer **172** and adds identifier **178** to ticket **176**. The service center employee then preferably utilizes computer **172** to communicate with server **122**, where the identifier of communicator **100** as provided in ticket **176** is used to identify communicator **100** as that of the customer of FIGS. **1**A-**3**G. Server **122** is also preferably operative to associate the customer's identifier, such as his telephone number, and the preferred pickup location as originally specified by the customer, with ticket **176**.

It is appreciated that server **122** is also preferably operative to provide the service center employee with an identifier of a storage and transport structure **180** which is destined for delivery to the customer's preferred pickup location. Upon verifying that the details of ticket **176** are correct, the service center employee preferably submits the completed ticket **176** to server **122**.

As shown in FIG. **4**E, the service center employee then places repaired mobile communicator into bin **174** and inserts bin **174** into storage and transport structure **180** which is destined for delivery to the customer's preferred pickup location.

Again, it is appreciated that once the repair is done, the service center employee can scan the identification code **2001** again. Thus, the server **2004** is updated (and thus, the database of the computerized tracking system **2003**) that the mobile communicator **100** has been repaired by the mobile communicator service center employee and will be destined for delivery to the customer's preferred pickup location (can be the automatic mobile communicator depot system from which the mobile communicator **100** was deposited or any other location).

Now, if the user will try to track the location of the mobile communicator **100** (by entering the identification code **2001**), the computerized tracking system **2003** will inform the same as for the updated location of the mobile communicator **100**.

As further shown in FIG. **4**E, server **122** then preferably sends a message **181** to the customer, notifying the customer that his mobile communicator has been repaired and will be available at the pickup location he originally specified on the following day at or after a particular time, such as 10:00 AM.

It should be pointed that said information will be available also if the customer will try to track his/her mobile communicator **100** (again, by entering the identification code **2001**).

It is appreciated that message **181** may be, for example, an email message or an SMS message sent to the customer's replacement mobile communicator **162**.

Turning now to FIG. **4**F, it is shown that a communicator depot service employee arrives at the mobile communicator service center on the following day at 6:00 AM, and retrieves storage and transport structure **180** for transport to a mobile communicator depot **182** located at the customer's preferred pickup location.

As further shown in FIG. **4**F, upon arriving at depot **182**, the communicator depot service employee preferably removes a storage and transport structure **184** from within depot **182** for transport to mobile communicator service center. Thereafter, the communicator depot service employee inserts storage and transport structure **180** into depot **182**, storage and transport structure **180** having repaired mobile communicators disposed therewithin. As yet further shown in FIG. **4**F, upon insertion of storage and transport structure **180** into depot **182**, depot **182** preferably sends a message to server **122**, notifying server **122** that storage and transport structure **180** having repaired mobile communicators disposed therewithin has been inserted into depot **182**.

Reference is now made to FIGS. **5**A and **5**B, which together are a simplified illustration of a replacement mobile communicator return stage of mobile communicator depot methodology in accordance with a preferred embodiment of the present invention.

As shown in FIG. **5**A, after storage and transport structure **180** containing repaired mobile communicator **100** has been deposited in depot **182**, such as at 8:00 AM, the customer preferably receives a message from server **122** that his repaired mobile communicator **100** is now available at his preferred pickup location. It is appreciated that the message may be, for example, an email message or an SMS message sent to the customer's replacement mobile communicator **162**.

Thereafter, such as at 10:00 AM, the customer arrives at depot **182** and identifies himself to depot **182** by entering his mobile communicator telephone number and a unique identifier, such as the last four digits of his credit card. The customer is then prompted to select a service option, and proceeds to select the Retrieve Repaired Telephone service.

Thereafter, as shown in FIG. **5**B, the customer is prompted by depot **182** to return replacement mobile communicator **162** and accessory kit **164**. The customer then preferably proceeds to place replacement mobile communicator **162** into receiving receptacle **104** and accessory kit **164** into bin **166**. Depot **182** then preferably notifies the customer that the returned equipment is being processed.

Reference is now made to FIGS. **6**A, **6**B, **6**C and **6**D, which together are a simplified illustration of replacement mobile communicator acceptance, validation and depersonalization functionality and customer's mobile communicator repersonalization and dispensing functionality in accordance with a preferred embodiment of the present invention.

As shown in FIG. **6**A, depot **182** preferably includes functionality for confirming that replacement mobile communicator **162** is placed in receptacle **104** with its screen **106** facing upwards, and also includes a camera **108** for photographing the top surface of mobile communicator **162**. It is appreciated that photographing of replacement mobile communicator **162** by camera **108** is operative to ascertain that mobile communicator **162** is not significantly damaged.

Robotic mechanism **110** is preferably employed for initially repositioning the receptacle **104** containing replacement mobile communicator **162** from its initial position, shown in FIG. **5**B, at which the customer placed replacement mobile communicator **162** therein, to a second position, shown in FIG. **6**A at which the top surface of replacement mobile communicator **162** is photographed by camera **108**. Preferably, the replacement mobile communicator **162** is verified by depot **182** to be identical to the replacement mobile communicator originally dispensed to the customer in the illustrations of FIGS. **3**A-**3**G, for example by scanning the IMEI identifier of replacement mobile communicator **162** and comparing the scanned IMEI identifier to the IMEI identifier of the replacement mobile communicator originally dispensed to the customer, as stored on server **122**.

According to one embodiment of the present invention the system can identify the IMEI of said mobile communicator so as to verify whether the mobile communicator is still under the supplier's\manufacturer warranty or not.

According to one embodiment of the present invention the system can identify the IMEI of said mobile communicator so as to verify whether the mobile communicator is a stolen mobile communicator.

Robotic mechanism **110** then preferably removes replacement mobile communicator **162** from receptacle **104** and disposes replacement mobile communicator **162** into one of bins **186** located in a replacement communicator storage and transport structure **188**. Each of bins **186** is preferably identified by a barcode **190**. Barcode scanner **118** which is preferably mounted on robotic mechanism **110** is preferably employed for reading the barcode of bin **186** in which replacement mobile communicator **162** is disposed, for recording the identity of the bin **186** and for associating the identity of bin **186** with the identifier of replacement mobile communicator **162** in a computerized database.

Thereafter, as shown in FIG. **6**B, accessory kit **164** is preferably retrieved from bin **166** by a second robotic arm **190**. Upon completing the retrieval of replacement mobile communicator **162** and accessory kit **164** from receptacle **104** and bin **166**, depot **182** preferably communicates with server **122** and requests deactivation of replacement mobile communicator **162** and reactivation of mobile communicator **100** in association with the customer's mobile communicator telephone number. It is appreciated that, as described hereinabove with reference to FIG. **4**D, the customer's mobile communicator telephone number is associated by server **122** with mobile communicator **100** and is therefore sufficient to uniquely identify mobile communicator **100**.

As yet further shown in FIG. **6**B, responsive to the communication from depot **182**, server **122** deactivates replacement mobile communicator **162** and activates mobile communicator **100** in association with the customer's mobile communicator telephone number. Preferably, server **122** also provides the identifier of the specific bin **174** in storage and transport structure **180** which contains repaired mobile communicator **100**. It is appreciated that upon deactivation of replacement mobile communicator **162**, depot **182** may ascertain whether the customer has stored new data on replacement mobile communicator **162** during the period of time in which he was in possession of replacement mobile communicator **162**, and may transfer the new data to mobile communicator **100** upon activation of mobile communicator **100**.

Thereafter, as shown in FIG. **6**C, barcode scanner **118**, which is preferably mounted on robotic mechanism **110**, is employed to identify and locate bin **174** by its barcode identifier **178**, which identifier **178** was provided by server **122** to **182** as identifying the bin in which repaired mobile communicator **100** is disposed.

Upon locating bin **174**, robotic mechanism **110** is preferably employed to retrieve repaired mobile communicator **100** from bin **174** and to deposit repaired mobile communicator **100** into receptacle **104**, and to thereafter reposition receptacle **104** to a position which is accessible to the customer. As further shown in FIG. **6**C, the customer is then prompted by depot **182** to retrieve his repaired mobile communicator from receptacle **104**.

Turning now to FIG. **6**D, it is shown that upon retrieving his repaired mobile communicator **100** from receptacle **104**, the

customer verifies that mobile communicator **100** is in working condition and that his contact list is present on communicator **100**.

Reference is now made to FIG. **7***a*, which illustrates a preferred embodiment of the present invention, in which the system comprising a housing **12**, a receiving port **14** for receiving a malfunctioning cellular mobile phone **16** and a dispensing mechanism **1000** for providing said user with a functioning cellular telephone. As mentioned above, once a cellular mobile phone **16** is received, a tag, having identification code **2001**, is coupled to the same.

It should be emphasized that the functioning cellular telephone does not necessarily have to be the same as the malfunctioning cellular mobile phone **16** (either the actual same phone or the same type) received.

It should be emphasized that according to another embodiment of the present invention the cellular phone console will be able to operate in a minimal interaction time between the client and the system in order to prevent any queues from creation and to maximize the convenient of use in the cellular phone console.

It should be emphasized that according to another embodiment of the present invention the cellular phone console (i.e., the automatic mobile communicator depot system) will be adapted to be placed in public domains; but, will be with the ability to prevent any burglary and theft of the content of the cellular phone console (i.e., the malfunctioned cellular phones received).

It should be emphasized that according to another embodiment of the present invention the cellular phone console will have an identification mechanism adapted to identify the user/client. The identification mechanism can be based on identifying the client's phone number and the identification that the client himself is indeed who he claims to be.

It should be emphasized that according to another embodiment of the present invention the cellular phone console will have an identification mechanism that will identify the malfunctioned cellular phone received (i.e., the model of the same, the producer of the same, the phone number of the client, the I.D. number of the client, address, email et cetera).

It should be emphasized that according to another embodiment of the present invention the cellular phone console will present the client with a menu in which the client will elect the malfunction of the phone.

According to another embodiment, the client would be able to add any comment/complaint with respect to the service or the malfunctioned phone.

According to another embodiment, the client would be able to receive an alternative functioning phone.

According to another embodiment, once the malfunctioned phone has been received within the cellular phone console, the client will receive a detailed document informing him on at least one detail selected from (a) the malfunctioned phone received; i.e., the identification of the phone's type, the number of the same etc. (b) the malfunction itself; (c) the time which the functioning phone will be provided; (d) the client's detail. i.e., name, ID number, a second number at which he can be reached, home address etc.; and, (e) an identification number in case something is lost; (e) the cellular phone console's identification number, its exact position, etc; (f) detail on the date and time at which the malfunctioned phone has been deposited in said cellular phone console; (g) an approximation as for the time that will be needed for the repair of said malfunctioned phone; (h) identification code **2001** of the malfunctioned phone received as so to enable the user to track the movement of the same; and any combination thereof.

Thus, according to this embodiment, the client, once depositing a malfunctioned phone, will receive a receipt. The receipt will include details of the malfunctioned phone (type, number etc.), the client (name, address, reachable number etc.), the malfunction itself (either software malfunctions or hardware malfunctions, etc.), details on the cellular phone console in which the malfunctioned phone had been deposit, detail on the date and time at which the malfunctioned phone has been deposited in said cellular phone console, an identification number in case something is lost; identification code **2001** of the malfunctioned phone received as so to enable the user to track the movement of the same, and any combination thereof.

According to another embodiment, the malfunctioned phone, once deposited, is sent to the manufacturer and/or agent for repair.

Once the malfunctioned phone has been repaired, the same can be sent to either (a) directly to the client; (b) to the cellular phone console in which the malfunctioned phone was deposited; or (c) another cellular phone console.

According to another embodiment, the client, when receiving the repaired phone, will be given by the cellular phone console a detailed second receipt in which there will be details of the malfunction, and the repair (i.e., whatever was repair in the malfunctioned phone, e.g. broken external panel).

According to another embodiment of the present invention, the repaired phone can be received from the cellular phone console at which said malfunctioned phone was deposit or at a different cellular phone console.

According to another embodiment, once the malfunctioned phone has been received, the same will be enclosed within a protected container. Said container will be protected against theft.

According to another embodiment, the client would be able to back-up the information obtained within the malfunctioned phone.

According to another embodiment, all of the malfunctioned phone's accessories (e.g., bag, battery, charger etc.) will be tagged with radio frequency identification (RFID).

According to another embodiment, once the malfunctioned phone is repaired, an SMS message will be sent to the client informing him of the same.

It should be emphasized that according to another embodiment of the present invention the cellular phone console will be provided with a camera adapted to identify the client.

Reference is now made to FIG. **7***b*, which shows a cellular phone console **10**, in accordance with one embodiment of the present invention. The cellular phone console **10** includes, inter alia, a housing **12**, a receiving port **14** for receiving a malfunctioning cellular mobile phone **16** as well as a user interactive unit **18** for displaying the current status and the current functionalities of the console **10**, including a menu of cellular mobile phone malfunctions **20**.

According to one embodiment, the user complaining of the malfunctioning mobile phone **16** inserts the malfunctioning mobile phone **16** into the receiving port **14** and the user interactive unit **18** displays, inter alia, a menu of mobile phone malfunctions **20**, which include hardware malfunctions **21** and software malfunctions **23**, as described below.

The user selects at least one malfunction **22** from the menu of mobile phone malfunctions **20**, typically, by touching an appropriate menu display malfunctions **25**, as displayed by the user interactive unit **18**.

It is appreciated that the user is also able to select at least one hardware malfunction, at least one software malfunction and/or a combination of hardware and software malfunctions.

The console **10** also includes a processor **24**, which controls the operational procedures and processes in the console **10**.

The console **10** also includes a tagging mechanism **2008** dispenses a tag **2000** (i.e., a barcode) to be attached to the malfunctioned phone **16**.

Reference is now made to FIGS. **7***b*-**8**, which shows further features of the console **10**, in accordance with a preferred embodiment of the present invention.

The console **10** may also include a replacement mobile phone storage compartment **1220** coupled to an ejection port **82**. Thus, following the insertion of the malfunctioning mobile phone **16** in the receiving port **14**, the user interactive unit **18** displays on the display panel **1060** (see FIG. **9**) a list of temporary replacement cellular mobile phones **124**, for selection by the user.

The malfunctioning mobile phone **16** is now prepared for forwarding to the mobile manufacturer and/or agent for repair.

If the user wishes to select a replacement mobile phone **124**, the user selects this option by activating the appropriate option on the interactive unit **18** and appropriately responds to a relevant prompt displayed on a display unit **1060** (see FIG. **9**).

During the period of time in which the malfunctioning mobile phone **16** is being repaired by forwarding the malfunctioning mobile phone **16** the phone manufacturer and/or agent for repairs, a replacement mobile phone **124** is available to the user and obtained via the ejection port **82** of the console **10**.

It should be pointed that once the machine readable indicia (and\or the identification code **2001**) has been issued, the user can track his/her malfunctioning mobile phone **16** through its delivery cycle (from the automatic mobile communicator depot system, the originating location), to the repairing laboratory back to client.

In order to track the malfunctioning mobile phone **16**, the user will log into a dedicated website in which he/she will enter the identification code **2001**. Once the identification code **2001** has been entered, a computerized tracking system **2003** will provide information as for the location of said mobile communicators by querying a server with said identification code **2001**. The server will provide **2006** information as for the location of the malfunctioning mobile phone **16**.

The computerized tracking system **2003** is configured to:

(a) to assign delivery destinations to each tag;

(b) to maintain a database of tracking data which reflects when each tag was scanned during the delivery cycle of said mobile communicator. Each scan indicates that the mobile communicator **100** has arrived the location at which the same has been scanned.

(c) to provide information as for the location of said mobile communicators by querying said server with said identification code.

As mentioned above, a replacement mobile phone **124** is available to the user. In order to obtain the replacement phone **124**, the console **10** provides the user with an appropriate repair certificate that the malfunctioning phone **16** is being forwarded to the mobile phone manufacturer and/or agent for repair.

Otherwise, the user receives the repair certificate without the replacement mobile phone **124**.

According to another embodiment of the present invention, the console **10** provides the user with an appropriate repair certificate that the malfunctioning phone **16** is being forwarded to the mobile phone manufacturer and/or agent for repair.

The repair certificate **500** (not shown in the figures) is being issued by a repair certificate mechanism (e.g., printer) **501** (see FIGS. **10**-**11**), once an issuing signal **502** (not shown in the figures) is being sent from the processor **24**.

The repair certificate can comprise at least one detail selected from (a) the malfunctioned phone received; i.e., the identification of the phone's type, the number of the same etc. (b) the malfunction itself; (c) the time which the functioning phone is expected to be provided; (d) the client's detail. i.e., name, I.D. number, a second number at which he can be reached, home address etc.; and, (e) an identification number in case something is lost; (f) the cellular phone console's identification number, its exact position, etc.; (g) detail on the date and time at which the malfunctioned phone has been deposited in said cellular phone console, approximate time in which the malfunctioned phone will be repaired; (h) the identification code **2001**; and any combination thereof.

According to another embodiment, the malfunctioned phone, once deposited, is sent to the manufacturer and/or agent for repair. Once the malfunctioned phone has been repaired, the same can be sent to either (a) directly to the client; (b) to the cellular phone console in which the malfunctioned phone was deposited; or (c) another cellular phone console.

According to another embodiment, the client, when receiving the repaired phone, will be given by the cellular phone console a detailed second receipt in which there will be details of the malfunction, and the repair (i.e., whatever was repair in the malfunctioned phone, e.g. broken external panel).

According to another embodiment of the present invention, the repaired phone can be received from the cellular phone console at which said malfunctioned phone was deposit or a different cellular phone console.

Reference is now made to FIG. **9**, which shows a front panel **1010** of the user interactive unit **18**, in accordance with one embodiment of the present invention.

The front panel **1010** includes, inter alia, a data input unit **1020**, such as a touch-type unit, for the user to input requisite data **1040**, such cellular mobile phone type and model number and a display screen **1060**, such as an LCD screen, for displaying various data, such as the user inputted data **104** as well as selected malfunction data as well as informing the user of the status and progress of a repair procedure.

The front panel **1010** includes, inter alia, a data input unit **1020**, such as a touch-type unit, for the user to input data **1040** and also a user identification code **105**.

The front panel **1010** is typically divided into a hardware section **1080** and a software section **1100**. The sections **1080** and **1100** include various options **1120** and **1140**, respectively, available for the user to identify and define to the console **10**, the mobile phone malfunction and/or malfunctions. Typically, the malfunctions include the hardware malfunctions **21** and the software malfunctions **23** listed above.

It should be emphasized, however, that in accordance with another embodiment of the present invention, console **10** doesn't necessarily includes a data input unit **1020**, hardware section **1080** and the software section **1100**.

If the user detects that a mobile phone malfunction is not included in the options **1120** and/or **1140**, the console **10** includes an option for the user to input a non-listed malfunction **1200** (not shown in the figures) by the user inputting the non-listed malfunction into the console **10** by means of the input unit **1020**.

Reference is now made to FIGS. **10-11** illustrating a preferred embodiment of the present invention in which a repair certificate mechanism (e.g., printer) **501** is illustrated.

Reference is now made to FIG. **10**, which shows a cellular phone console **10**, in accordance with one embodiment of the present invention. The cellular phone console **10** includes, inter alia, a housing **12**, a receiving port **14** for receiving a malfunctioning cellular mobile phone **16** as well as a user interactive unit **18** for displaying the current status and the current functionalities of the console **10**.

A user complaining of the malfunctioning mobile phone **16** inserts the malfunctioning mobile phone **16** into the receiving port **14** and the user interactive unit **18** displays, inter alia, a menu of mobile phone malfunctions **20**, which include hardware malfunctions **21** and software malfunctions **23**, as described below.

It should be emphasized that the interactive unit **18** displays does not necessarily displays the malfunctions **20** and the user simply deposit the malfunctioning cellular mobile phone **16** in console **10**.

Thus, alternatively, it should be pointed out that the user merely deposit the malfunctioning mobile phone **16** without selecting a malfunction from the menu of mobile phone malfunctions **20**.

Alternatively, the user selects at least one malfunction **22** from the menu of mobile phone malfunctions **20**, typically, by touching an appropriate menu display malfunctions **25**, as displayed by the user interactive unit **18**.

The malfunction **22** can be at least one hardware malfunctions **21** or at least one software malfunctions **23** or any combination thereof.

It is appreciated that the user is also able to select at least one hardware malfunction, at least one software malfunction and/or a combination of hardware and software malfunctions.

The console **10** also includes a processor **24**, which controls the operational procedures and processes in the console **10**.

According to this embodiment, the console **10** also include a replacement mobile phone storage compartment **1220** coupled to an ejection port **82**.

Thus, following the insertion of the malfunctioning mobile phone **16** in the receiving port **14**, the user interactive unit **18** displays on the display panel **1060** (see FIG. **9**) a list of temporary replacement cellular mobile phones **124**, for selection by the user.

The malfunctioning mobile phone **16** is now prepared for forwarding to the mobile manufacturer and/or agent for repair.

If the user wishes to select a replacement mobile phone **124**, the user selects this option by activating the appropriate option on the interactive unit **18** and appropriately responds to a relevant prompt displayed on a display unit **1060**.

During the period of time in which the malfunctioning mobile phone **16** is being repaired by forwarding the malfunctioning mobile phone **16** the phone manufacturer and/or agent for repairs, a replacement mobile phone **124** is available to the user and obtained via the ejection port **82** of the console **10**.

In order to obtain the replacement phone **124**, the console **10** provides the user with an appropriate repair certificate that the malfunctioning phone **16** is being forwarded to the mobile phone manufacturer and/or agent for repair. The repair certificate **500** is being issued by a repair certificate mechanism (e.g., printer) **501**, once an issuing signal **502** is being sent from the processor **24**.

The repair certificate will comprise details selected from (a) the malfunctioned phone received; i.e., the identification of the phone's type, the number of the same etc. (b) the malfunction itself; (c) the time which the functioning phone will be provided; (d) the client's detail. i.e., name, ID number, a second number at which he can be reached, home address etc.; and, (e) an identification number in case something is lost; (f) the cellular phone console's identification number, its exact position, etc. (g) detail on the date and time at which the malfunctioned phone has been deposited in said cellular phone console, (h) identification code **2001** (so as to enable the customer to track his/hers malfunctioned phone received; and any combination thereof.

Otherwise, the user receives the repair certificate without the replacement mobile phone **124**.

According to another embodiment, the malfunctioned phone, once deposited, is sent to the manufacturer and/or agent for repair. Once the malfunctioned phone has been repaired, the same can be sent to either (a) directly to the client; (b) to the cellular phone console in which the malfunctioned phone was deposited; or (c) another cellular phone console.

According to another embodiment, the client, when receiving the repaired phone, will be given by the cellular phone console a detailed second receipt in which there will be details of the malfunction, and the repair (i.e., whatever was repair in the malfunctioned phone, e.g. broken external panel).

According to another embodiment of the present invention, the repaired phone can be received from the cellular phone console at which said malfunctioned phone was deposit or a different cellular phone console.

According to another embodiment of the present invention, the malfunctioning cellular phone's number dispensed into the cellular phone console has the same phone number as the dispensed functioning cellular telephone.

According to another embodiment of the present invention, the cellular phone console will comprise means adapted to transfer data stored in the malfunctioning cellular phone to said functioning cellular telephone.

According to another embodiment of the present invention, the data comprises at least part of a contact list.

According to another embodiment of the present invention, the transfer of data is at least partly wireless.

It will be appreciated by persons skilled in the art that the present invention is not limited by what has been particularly shown and described hereinabove. Rather the scope of the present invention includes both combinations and subcombinations of the various features described hereinabove as well as modifications thereof which would occur to persons skilled in the art upon reading the foregoing description and which are not in the prior art.

In the foregoing description, embodiments of the invention, including preferred embodiments, have been presented for the purpose of illustration and description. They are not intended to be exhaustive or to limit the invention to the precise form disclosed. Obvious modifications or variations are possible in light of the above teachings. The embodiments were chosen and described to provide the best illustration of the principals of the invention and its practical application, and to enable one of ordinary skill in the art to utilize the invention in various embodiments and with various modifications as are suited to the particular use contemplated. All such modifications and variations are within the scope of the invention as determined by the appended claims when interpreted in accordance with the breadth they are fairly, legally, and equitably entitled.

The invention claimed is:

1. An automatic mobile communicator depot system for tracking mobile communicators during a delivery cycle of the same, comprising:

a mobile communicator acceptor for accepting said mobile communicators and providing mobile communicator acceptance inputs;

a mobile communicator dispenser for dispensing substitute mobile communicators in response to substitute mobile communicator dispensing instructions;

a customer interface receiving customer inputs identifying a specific mobile communicator with a specific customer; and

a depot controller responsive at least to said customer inputs and said acceptance inputs and including:

dispenser control functionality for providing dispensing instructions to said mobile communicator dispenser to dispense a specific substitute mobile communicator to a specific customer;

automatic telephone number transfer functionality for transferring a telephone number from a mobile communicator received by said mobile communicator acceptor from a given customer to said substitute mobile communicator dispensed by said mobile communicator dispenser to said customer;

tagging mechanism, adapted to dispense a plurality of tags; each of said tags being in communication with each of said mobile communicators received by said mobile communicator acceptor; said tag having machine readable indicia indicating an identification code for each of said mobile communicator, to which said tag has been in communication with;

a computerized tracking system in communication with a server, adapted to provide information as for the location of said mobile communicators by querying said server with said identification code said computerized tracking system is configured to:

to maintain a database of tracking data which reflects when each tag was scanned during said delivery cycle of said mobile communicator;

to assign delivery destinations to each tag;

to provide information as for the location of said mobile communicators by querying said server with said identification code.

2. The automatic mobile communicator depot system according to claim 1, wherein said tags are scanned at said delivery destinations.

3. The automatic mobile communicator depot system according to claim 2, further comprising at least one selected from a group consisting of (a) customer messaging functionality operative to notify said customer that his mobile communicator has been repaired and will be available for pickup at a specific automatic mobile communicator depot at a specific time; (b) customer messaging functionality operative to notify said customer that his mobile communicator has been repaired and is available for pickup at a specific automatic mobile communicator depot; and any combination thereof.

4. The automatic mobile communicator depot system according to claim 1, wherein said tags are physically coupled to said mobile communicators.

5. The automatic mobile communicator depot system according to claim 1, wherein each tag is scanned to determine date and time of arrival of each tag at a series of locations, wherein the multiple locations include the originating location of said mobile communicators, said delivery destinations.

6. The automatic mobile communicator depot system according to claim 5, wherein said originating location of said mobile communicators is the geographic location of said automatic mobile communicator depot.

7. The automatic mobile communicator depot system according to claim 1, wherein said tags are scanned at delivery destinations at an end of said delivery cycle and at the originating location of said mobile communicators at the beginning of said delivery cycle.

8. The automatic mobile communicator depot system according to claim 1, wherein one or more of said tags comprise a radio frequency identifier (RFID) tag.

9. The automatic mobile communicator depot system according to claim 8, wherein at least one of the following is being held true (a) said data comprises at least part of a contact list; (b) said transferring of data is at least partly wireless; (c) said automatic data transfer functionality is also operable for transferring of data stored in said temporary substitute mobile communicator earlier received by said mobile communicator acceptor from a given customer to said mobile communicator dispensed to said customer in a repaired state.

10. The automatic mobile communicator depot system according to claim 1, wherein said mobile communicator acceptor is operative to accept from a customer a mobile communicator to be repaired and said mobile communicator dispenser is operative to dispense to said customer a temporary replacement mobile communicator to be used until the customer's mobile communicator is returned in a repaired state to the customer.

11. The automatic mobile communicator depot system according to claim 10, wherein said mobile communicator acceptor is also operative to accept from said customer said temporary replacement mobile communicator and said mobile communicator dispenser is operative to dispense said mobile communicator earlier received by said mobile communicator acceptor from said customer, to said customer in a repaired state.

12. The automatic mobile communicator depot system according to claim 10, wherein said mobile communicator acceptor is also operative to accept from said customer a temporary replacement mobile communicator dispensed to said customer by a mobile communicator dispenser which is not said a mobile communicator dispenser, and said mobile communicator dispenser is operative to dispense said mobile communicator earlier received from said customer by a mobile communicator acceptor which is not said mobile communicator acceptor, to said customer in a repaired state.

13. The automatic mobile communicator depot system according claim 10, wherein said depot controller also includes:

automatic data transfer functionality operable for transferring of data stored in a mobile communicator received by said mobile communicator acceptor from a given customer to said temporary substitute mobile communicator dispensed by said mobile communicator dispenser to said customer.

14. The automatic mobile communicator depot system according claim 10, wherein said depot controller also includes:

automatic data transfer functionality operable for transferring of data of a given customer, said data stored in an internet accessible storage facility, to said temporary substitute mobile communicator dispensed by said mobile communicator dispenser to said customer.

15. The automatic mobile communicator depot system according to claim 14 wherein at least one of the following is

being held true (a) said data comprises at least part of a contact list; (b) said transferring of data is at least partly wireless.

16. The automatic mobile communicator depot system according to claim **10**, wherein said customer inputs comprise at least a description of a malfunction of said specific mobile communicator which needs to be repaired and a preferred future pickup location of said specific mobile communicator in a repaired state.

17. The automatic mobile communicator depot system according to claim **1**, wherein said mobile communicator acceptor is operative to accept from a customer a mobile communicator to be replaced and said mobile communicator dispenser is operative to dispense to said customer a permanent replacement mobile communicator.

18. The automatic mobile communicator depot system according to claim **1**, wherein said automatic telephone number transfer functionality is operative for transferring said telephone number from said temporary replacement mobile communicator received by said mobile communicator acceptor from said customer to said mobile communicator dispensed to said customer in a repaired state.

19. The automatic mobile communicator depot system according to claim **1**, additionally comprising a customer internet interface operable for receiving customer inputs identifying a specific mobile communicator with a specific customer via the internet.

20. The automatic mobile communicator depot system according to claim **1**, wherein said customer inputs comprise at least a telephone number of said specific mobile communicator.

21. The automatic mobile communicator depot system according to claim **1**, wherein said mobile communicator acceptor also comprises imaging functionality for capturing an image of at least part of said specific mobile communicator.

22. The automatic mobile communicator depot system according to claim **1**, wherein said mobile communicator acceptor also comprises depot-service center communication functionality operative for communicating between said depot and at least one mobile communicator service center.

23. The automatic mobile communicator depot system according to claim **22**, wherein said depot-service center communication functionality is operable for communicating at least some of said customer inputs to said at least one mobile communicator service center.

24. The automatic mobile communicator depot system according to claim **23**, wherein said mobile communicator acceptor is also operative to place said specific mobile communicator into a bin located within a mobile communicator storage and transport structure.

25. The automatic mobile communicator depot system according to claim **24**, wherein said depot-service center communication functionality is operable for communicating the identities of said bin and of said mobile communicator storage and transport structure to said at least one mobile communicator service center in association with a unique identifier of said specific mobile communicator.

26. The automatic mobile communicator depot system according to claim **24**, wherein said mobile communicator storage and transport structure is operable for removal thereof from said depot and for transport between said depot and said mobile communicator service center.

27. The automatic mobile communicator depot system according to claim **21**, wherein said automatic telephone number transfer functionality is operative to employ said depot-service center communication functionality to employ said at least one mobile communicator service center for said transferring a telephone number.

28. The automatic mobile communicator depot system according to claim **1**, wherein:

said mobile communicator dispenser is also operable for dispensing, to said customer, mobile communicator accessories suitable for use with said substitute mobile communicators to be used until the customer's mobile communicator is returned in a repaired state to the customer; and

said mobile communicator acceptor is also operable for accepting, from said customer, said mobile communicator accessories earlier dispensed to said customer, upon return of said customer's mobile communicator in a repaired state to the customer.

29. The automatic mobile communicator depot system according to claim **28**, wherein said accessories comprise at least one of a mobile communicator charger and a data synchronizing cable.

30. The automatic mobile communicator depot system according to claim **1**, additionally comprising at least one identification mechanism adapted to identify at least one selected from a group consisting of the user, the model of said mobile communication received, the producer of said mobile communication received, the phone number of said user, the malfunction with said mobile communication and any combination thereof.

31. The automatic mobile communicator depot system according to claim **1**, additionally comprising receipt dispensing mechanism adapted to dispense at least one receipt once said mobile communicator is received within said automatic mobile communicator depot system; further wherein said at least one receipt comprising at least one detail selected from a group consisting of details of said mobile communicator, detail on said user, the malfunction of said mobile communicator, details on the automatic mobile communicator depot system in which the mobile communicator had been deposit, detail on the date and time at which the mobile communicator has been deposited in said automatic mobile communicator depot, said identification code, and an identification number in case said automatic mobile is lost; and any combination thereof.

32. The cellular phone console of claim **31**, wherein at least one of the following is being held (a) said details of said automatic mobile is selected from a group consisting of type of said automatic mobile, phone number of said automatic mobile and any combination thereof; (b) said detail on said user is selected from a group consisting of name of said user, ID of said user, address of said user, reachable number of said user and any combination thereof.

33. The automatic mobile communicator depot system according to claim **1**, additionally comprising means adapted to identify the IMEI of said mobile communicator.

34. A method for tracking mobile communicators deposited in an automatic mobile communicator depot during a delivery cycle of the same, comprising:

a. accepting mobile communicators and providing mobile communicator acceptance inputs;

b. assigning at least one tag to each of said mobile communicators accepted to said automatic mobile communicator depot; thereby each of said mobile communicators is provided with a machine readable indicia indicating an identification code;

c. assigning a delivery destinations to each of said tags by using the computerized tracking system;

d. dispensing substitute mobile communicators in response to substitute mobile communicator dispensing instructions;

e. receiving customer inputs identifying a specific mobile communicator with a specific customer; and

f. responsive at least to said customer inputs and said acceptance inputs:

(i) providing dispensing instructions to said mobile communicator dispenser to dispense a specific substitute mobile communicator to a specific customer;

g. automatically transferring a telephone number from a mobile communicator received by said mobile communicator acceptor from a given customer to said substitute mobile communicator dispensed by said mobile communicator dispenser to said customer;

h. querying a server with said identification code; thereby tracking said mobile communicators.

35. The method according to claim **34**, additionally comprising step of maintaining a database of tracking data which reflects when each tag was scanned during said delivery cycle of said mobile communicator.

36. The method according to claim **34**, wherein said tags are physically coupled to said mobile communicators.

37. The automatic mobile communicator depot system according to claim **36**, wherein at least part of said identities of said bin and of said mobile communicator storage and transport structure are encoded in barcodes imprinted on respective ones of said bin and said mobile communicator storage and transport structure.

38. The method according to claim **34**, additionally comprising step of transporting said mobile and said tags to said delivery destinations.

39. The automatic mobile communicator depot system according to claim **38**, further comprising barcode scanning functionality operable for reading said barcodes.

40. The method according to claim **34**, additionally comprising steps of repeating steps (b-c) of

(b) assigning at least one tag to each of said mobile communicators accepted to said automatic mobile communicator depot; thereby each of said mobile communicators is provided with a machine readable indicia indicating an identification code;

(c) assigning a delivery destinations to each of said tags by using the computerized tracking system;

wherein said steps are repeated until said mobile communicators arrives said delivery destinations at the end of said delivery cycle.

41. The method according to claim **34**, additionally comprising steps of repeating step (h) of querying a server with said identification code; thereby tracking said mobile communicators.

42. The method according to claim **34**, additionally comprising step of scanning each tag to determine date and time of arrival to said delivery destinations.

43. The method according to claim **34**, additionally comprising step of scanning each tag to determine date and time of arrival of each tag at a series of locations, wherein the multiple locations include the originating location of said mobile communicators, said delivery destinations.

44. The method according to claim **43**, wherein said originating location of said mobile communicators is the geographic location of said automatic mobile communicator depot.

45. The method according to claim **34**, additionally comprising step of re-assigning a delivery destinations to said mobile communicators.

46. The method according to claim **34**, wherein said tags are scanned at delivery destinations at an end of said delivery cycle and at the originating location of said mobile communicators at the beginning of said delivery cycle.

47. The method according to claim **34**, wherein one or more of said tags comprise a radio frequency identifier (RFID) tag.

48. The method according to claim **34**, additionally comprising step of informing the owner of said mobile communicators that said mobile communicators has arrived said delivery destinations.

49. The method according to claim **48**, wherein said step of informing is performed by sending said owner an SMS or an email.

50. The method according to claim **34**, wherein:

said accepting mobile communicators comprises accepting from a customer a mobile communicator to be repaired; and

said dispensing substitute mobile communicators comprises dispensing to said customer a temporary replacement mobile communicator to be used until the customer's mobile communicator is returned in a repaired state to the customer.

51. The method according to claim **50**, wherein:

said accepting mobile communicators comprises accepting from said customer said temporary replacement mobile communicator; and

said dispensing substitute mobile communicators comprises dispensing said mobile communicator earlier received from said customer, to said customer in a repaired state.

52. The method according claim **50**, further comprising automatically transferring data stored in a mobile communicator received from a given customer to said temporary substitute mobile communicator dispensed to said customer.

53. The method according to claim **52**, wherein at least one of the following is being held true (a) said data comprises at least part of a contact list; (b) said transferring of data is at least partly wireless; (c) said method further comprising automatically transferring data stored in said temporary substitute mobile communicator earlier received from said given customer to said mobile communicator dispensed to said customer in a repaired state; and any combination thereof.

54. The method according claim **50**, further comprising automatically transferring data of a given customer, said data stored in an internet accessible storage facility, to said temporary substitute mobile communicator dispensed to said customer.

55. The method according to claim **54**, wherein at least one of the following is being held true (a) said data comprises at least part of a contact list; (b) said transferring of data is at least partly wireless.

56. The method according to claim **50**, wherein said customer inputs comprise at least a description of a malfunction of said specific mobile communicator which needs to be repaired and a preferred future pickup location of said specific mobile communicator in a repaired state.

57. The method according to claim **50**, additionally comprising at least one step selected from a group consisting of (a) notifying said customer that his mobile communicator has been repaired and will be available for pickup at a specific automatic mobile communicator depot at a specific time; (b) notifying said customer that his mobile communicator has been repaired and is available for pickup at a specific automatic mobile communicator depot.

58. The method according to claim 34, wherein:

said accepting mobile communicators comprises accepting from a customer a mobile communicator to be replaced; and

said dispensing substitute mobile communicators comprises dispensing to said customer a permanent replacement mobile communicator.

59. The method according to claim 34, wherein said transferring comprises automatically transferring said telephone number from said temporary replacement mobile communicator received from said customer to said mobile communicator dispensed to said customer in a repaired state.

60. The method according to claim 34, further comprising receiving customer inputs identifying a specific mobile communicator with a specific customer via the internet.

61. The method according to claim 34, wherein said customer inputs comprise at least a telephone number of said specific mobile communicator.

62. The method according to claim 34, further comprising at least one step selected from a group consisting of (a) capturing an image of at least part of said mobile communicator (b) communicating between said depot and at least one mobile communicator service center; and any combination thereof.

63. The method according to claim 62, wherein said communicating comprises communicating at least some of said customer inputs to said at least one mobile communicator service center.

64. The method according to claim 63, further comprising placing said specific mobile communicator into a bin located within a mobile communicator storage and transport structure.

65. The method according to claim 64, wherein said communicating comprises communicating the identities of said bin and of said mobile communicator storage and transport structure to said at least one mobile communicator service center in association with a unique identifier of said specific mobile communicator.

66. The method according to claim 65, wherein at least part of said identities of said bin and of said mobile communicator storage and transport structure are encoded in barcodes imprinted on respective ones of said bin and said mobile communicator storage and transport structure.

67. The method according to claim 64, wherein said mobile communicator storage and transport structure is operable for removal thereof from said depot and for transport between said depot and said mobile communicator service center.

68. The method according to claim 34, further comprising:

dispensing, to said customer, mobile communicator accessories suitable for use with said substitute mobile communicators to be used until the customer's mobile communicator is returned in a repaired state to the customer; and

accepting, from said customer, said mobile communicator accessories earlier dispensed to said customer, upon return of said customer's mobile communicator in a repaired state to the customer.

69. The method according to claim 68, wherein said accessories comprise at least one of a mobile communicator charger and a data synchronizing cable.

70. The method of claim 34, additionally comprising step of dispensing at least one receipt once said automatic mobile is received within said automatic mobile communicator depot; wherein said at least one receipt comprising at least one detail selected from a group consisting of details of said automatic mobile, detail on said user, the malfunction of said automatic mobile, details on the automatic mobile communicator depot in which the automatic mobile had been deposit, and an identification number in case said automatic mobile is lost, detail on the date and time at which the automatic mobile has been deposited in said automatic mobile communicator depot, and any combination thereof; further wherein said details of said automatic mobile is selected from a group consisting of type of said automatic mobile, phone number of said automatic mobile and any combination thereof; further wherein said detail on said user is selected from a group consisting of name of said user, ID number of said user, address of said user, reachable number of said user and any combination thereof.

71. The method according to claim 34, additionally comprising step of identifying the IMEI of said mobile communicator.

* * * * *